HCD-VX333

SERVICE MANUAL

E Model
Tourist Model

Ver 1.1 2001. 09

- HCD-VX333 is the tuner, deck, CD and amplifier section in MHC-VX333.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM58B-K6BD38
	Base Unit Name	BU-K6BD37A
	Optical Pick-up Name	KSM-213DCP
Tape deck Section	Model Name Using Similar Mechanism	NEW

SPECIFICATIONS

Amplifier section

The following measured at AC 120, 220, 240 V 50/60 Hz
DIN power output (rated) 100 + 100 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 120 + 120 watts (6 ohms at 1 kHz, 10% THD)

Inputs
MD/VIDEO (AUDIO) IN (phono jacks): voltage 450/250 mV, impedance 47 kilohms
GAME (AUDIO) IN (phono jack): voltage 450 mV, impedance 47 kilohms
MIC 1/2 (mini jack): sensitivity 1 mV, impedance 10 kilohms

Outputs
MD/VIDEO (AUDIO) OUT (phono jacks): voltage 250 mV impedance 1 kilohms
VIDEO OUT (phono jack): max. output level 1Vp-p, unbalanced, Sync negative, load impedance 75 ohms
S-VIDEO OUT (4-pin/mini-DIN jack): Y: 1Vp-p, unbalanced, Sync negative, C: 0.286Vp-p, load impedance 75 ohms
PHONES (stereo mini jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 6 to 16 ohms

CD/VIDEO CD player section

System: Compact disc and digital audio and video system
Laser: Semiconductor laser (λ=780 nm) Emission duration: continuous
Wavelength: 780 – 790 nm
Frequency response: 2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
Video color system format: NTSC, PAL
CD OPTICAL DIGITAL OUT (Square optical connector jack, rear panel)
Wavelength: 660 nm
Output Level: –18 dBm

Tape deck section

Recording system: 4-track 2-channel stereo
Frequency response: 40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
Tourist model: 76.0 – 108.0 MHz
Other models: 87.5 – 108.0 MHz
Antenna: FM lead antenna
Antenna terminals: 75 ohm unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range
Middle Eastern and Philippine models: 531 – 1,602 kHz (with the interval set at 9 kHz)
Other models: 531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna: AM loop antenna
Antenna terminals: External antenna terminal
Intermediate frequency: 450 kHz

— Continued on next page —

COMPACT DISC DECK RECEIVER

9-873-233-02
2001I1600-1
© 2001.9
Sony Corporation
Home Audio Company
Shinagawa Tec Service Manual Production Group

SONY®

General

Power requirements	
Thai model:	220 V AC, 50/60 Hz
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	190 watts
Dimensions (w/h/d)	Approx. 280×325×421 mm
Mass	Approx. 10.5 kg
Supplied accessories:	AM loop antenna (1) Remote Commander (1) Batteries (2) FM lead antenna (1) Speaker pads (8) Video cable (1)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing
- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

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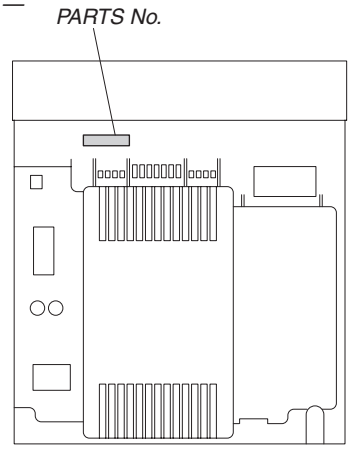
MODEL IDENTIFICATION
— BACK PANEL —



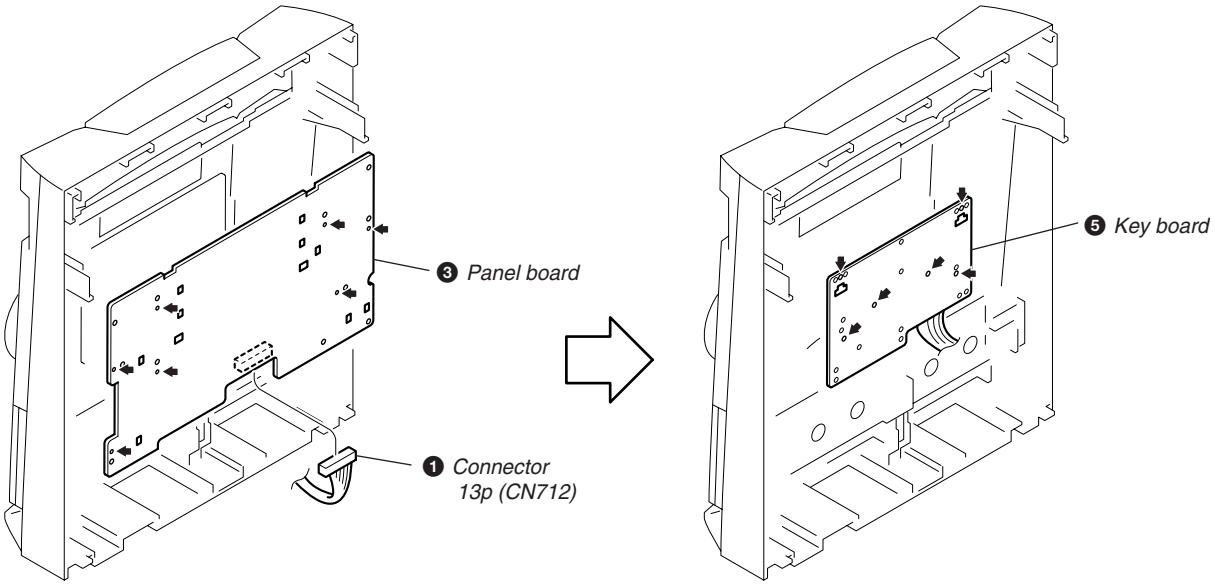
MODEL	PARTS No.
E, EA, IA, JE, SP, TW models	4-234-091-3☐
TH model	4-234-091-9☐

- Abbreviation
  MY : Malaysia model.
  SP : Singapore model.
  TH : Thai model.
  EA : Saudi Arabia model.
  JE : Tourist model.
  IA : Indonesian model.
  TW : Taiwan model.

SECTION 1
SERVICE NOTE

REMOVING THE PANEL BOARD AND THE KEY BOARD

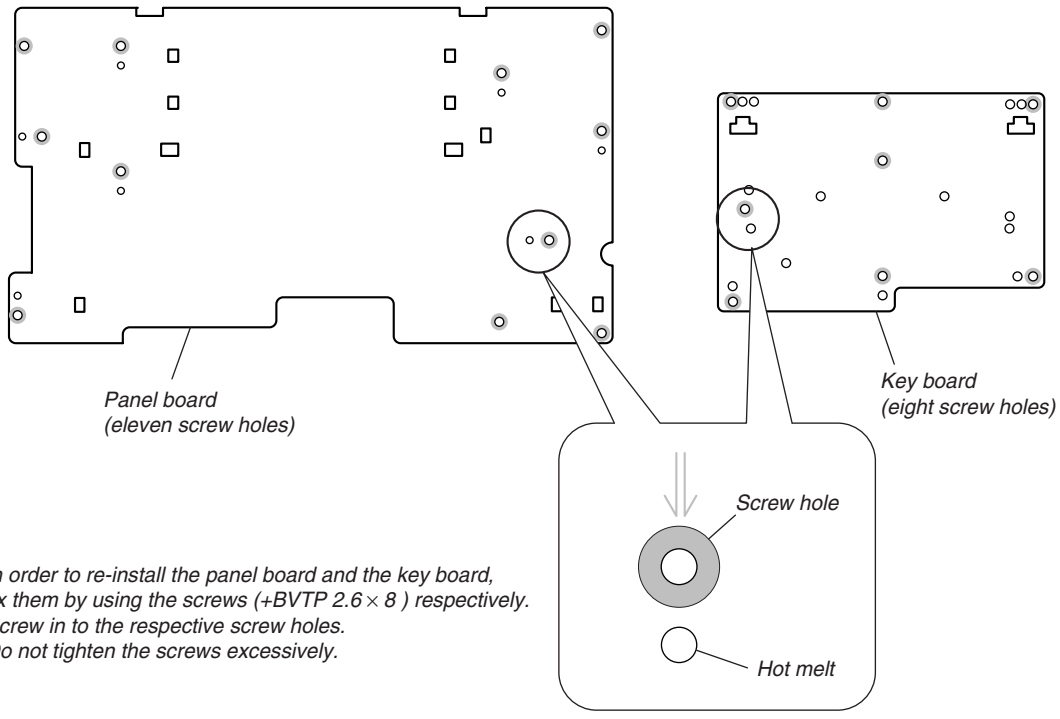
** The panel board and the key board only are connected to the front panel by means of hot-melting the plastics.*



❷ *Cut the seven melted-connection points with a cutting plier.*

❹ *Cut the six melted-connection points with a cutting plier.*

Note for installing the panel board and the key board

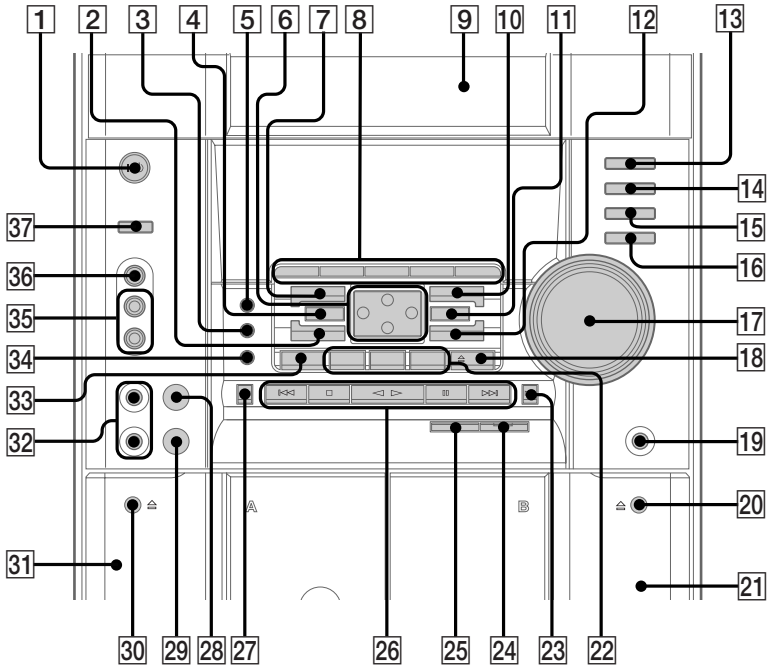


In order to re-install the panel board and the key board, fix them by using the screws (+BVTP 2.6 × 8) respectively. Screw in to the respective screw holes. Do not tighten the screws excessively.

SECTION 2
GENERAL

This section is extracted from instruction manual.

Main unit

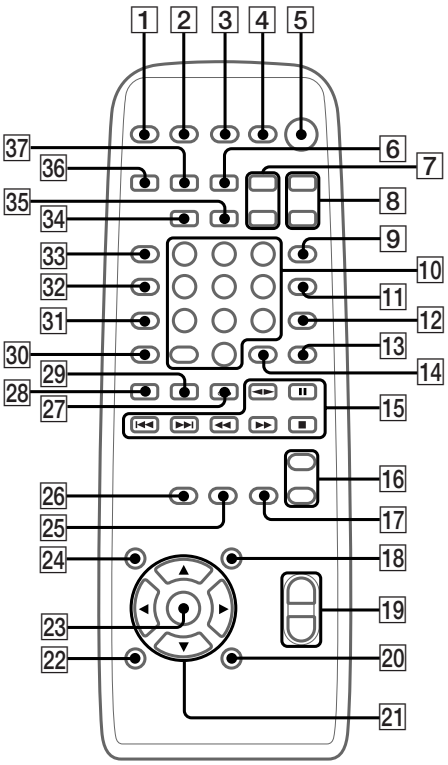


AUDIO jacks 35 (30)
CD 13 (10 – 13, 22, 23)
CD SYNC 25 (22, 23)
Deck A 31 (20, 21)
Deck B 21 (20 – 24)
DIRECTION 8 (21 – 23, 27)
DISC 1 – 3 22 (10, 11, 13)
DISC SKIP EX-CHANGE 33 (10, 11, 13)
Disc tray 9 (10)
DISPLAY 8 (9, 14)
ECHO LEVEL control 28 (27)
EDIT 8 (23)
EFFECT ON/OFF 4 (25, 27)
ENTER 11 (9, 13, 14, 18, 19, 23 – 25, 28, 29, 35)
GAME 37 (26, 30)
GAME EQ 2 (24, 26)
GROOVE 5 (24)
KARAOKE PON 34 (27)
MD (VIDEO) 16 (30)
MIC 1, 2 jack 32 (26, 27)
MIC LEVEL control 29 (26, 27)
MOVIE EQ 10 (24, 25)
MUSIC EQ 7 (24, 25)
P FILE 12 (25)
PHONES jack 19
PICTURE EFFECT 3 (18)
PLAY MODE 8 (10 – 12)
REC PAUSE/START 24 (22, 23)
REPEAT 8 (11)
SPECTRUM 8 (26)
STEREO/MONO 8 (20)
TAPE A/B 15 (20, 22)
TUNER MEMORY 8 (19)
TUNER/BAND 14 (19, 22)
VIDEO jack 36 (30)
VOLUME control 17

BUTTON DESCRIPTIONS

I/⏻ (power) 1
▲/▼/◀/▶ 6
⏏ OPEN/CLOSE 18
⏏ (deck B) 20
▶▶ (fast forward) 23
+ 23
⏮ (go back) 26
⏭ (go forward) 26
❚❚ (pause) 26
◁▷ (play) 26
■ (stop) 26
◀◀ (rewind) 27
– 27
⏏ (deck A) 30

Remote Control



CD 36 (10 – 13, 22, 23)
CINEMA SPACE 25 (26)
CLEAR 30 (12)
CLOCK/TIMER SELECT 2 (24, 29)
CLOCK/TIMER SET 3 (9, 23, 28, 29)
DISPLAY 33 (9, 14)
D.SKIP 13 (10, 11, 13)
EFFECT ON/OFF 17 (25, 27)
ENTER 23 (9, 13, 14, 18, 19, 23 – 25, 28, 29, 35)
GAME 34 (26, 30)
GAME EQ 22 (24, 26)
KARAOKE PON 31 (27)
KEY CONTROL ♯/♭ 16 (27)
MD (VIDEO) 35 (30)
MOVIE EQ 18 (24, 25)
MUSIC EQ 24 (24, 25)
NEXT 29 (13, 14, 17)
Numeric buttons 10 (14, 16, 17, 18)
ON SCREEN 14 (15)
P FILE 20 (25)
PICTURE/EFFECT 26 (18)
PRESET + 15 (19)
PRESET – 15 (19)
PREV 28 (13, 14, 17)
REPEAT 11 (11)
RETURN 27 (14)
SELECT 15 (13, 14)
SLEEP 1 (28)
SPECIAL MENU 12 (16, 17)
SPECTRUM 32 (26)
TAPE A/B 6 (20, 22)
TUNER/BAND 37 (19, 22)
TUNING + 15 (19, 20)
TUNING – 15 (19, 20)
TV I/⏻ 4 (8)
TV CH +/– 8 (8)
TV/VIDEO 9 (8)
TV VOL +/– 7 (8)
VOL 19

BUTTON DESCRIPTIONS

I/⏻ (power) 5
▶▶ (fast forward) 15
I◀◀ (go back) 15
▶▶I (go forward) 15
II (pause) 15
◀▶ (play) 15
◀◀ (rewind) 15
■ (stop) 15
▲/▼/◀/▶ 21

Setting the time

1 Turn on the system.

2 Press CLOCK/TIMER SET on the remote.

Proceed to step 5 when "CLOCK" appears in the display.

3 Press ▲ or ▼ repeatedly to select "SET CLOCK".

4 Press ENTER.

5 Press ▲ or ▼ repeatedly to set the hour.

6 Press ►.

The minute indication flashes.

7 Press ▲ or ▼ repeatedly to set the minute.

8 Press ENTER.

Tip

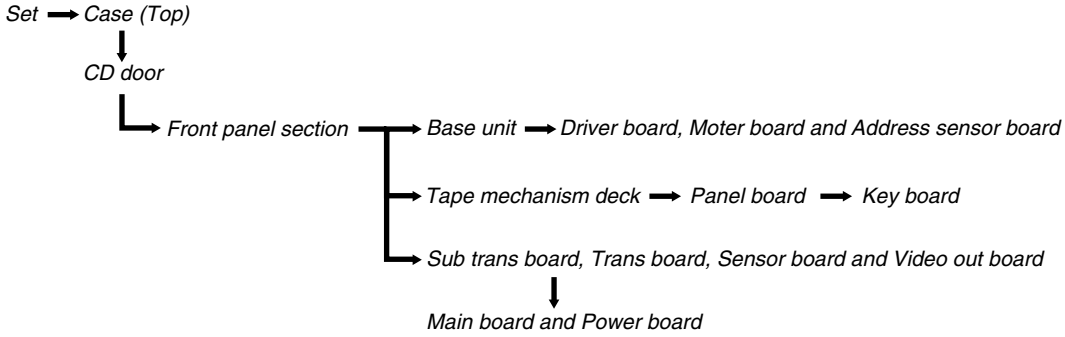
If you made a mistake or want to change the time, start over from step 2.

Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

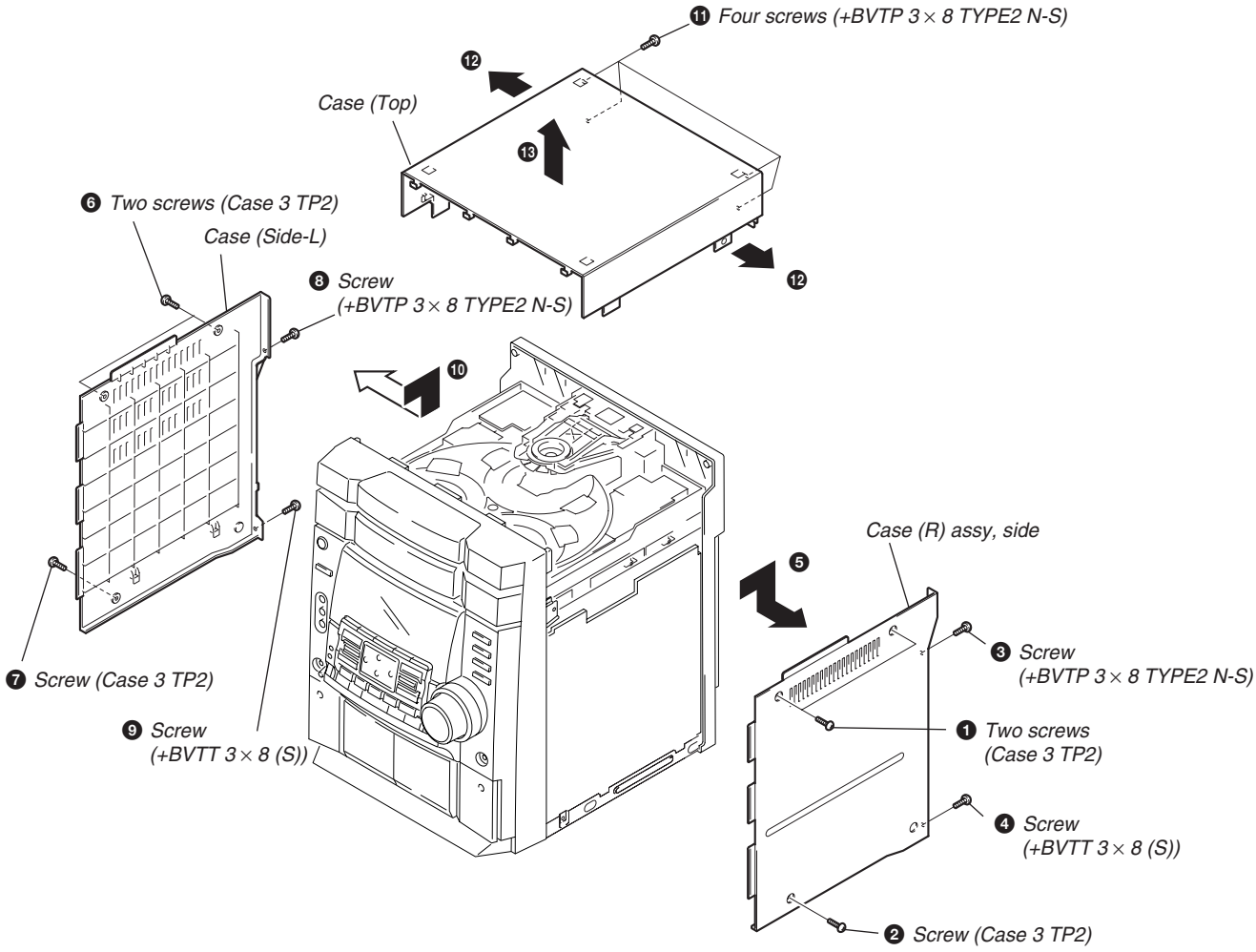
SECTION 3
DISASSEMBLY

Note : Disassemble the unit in the order as shown below.

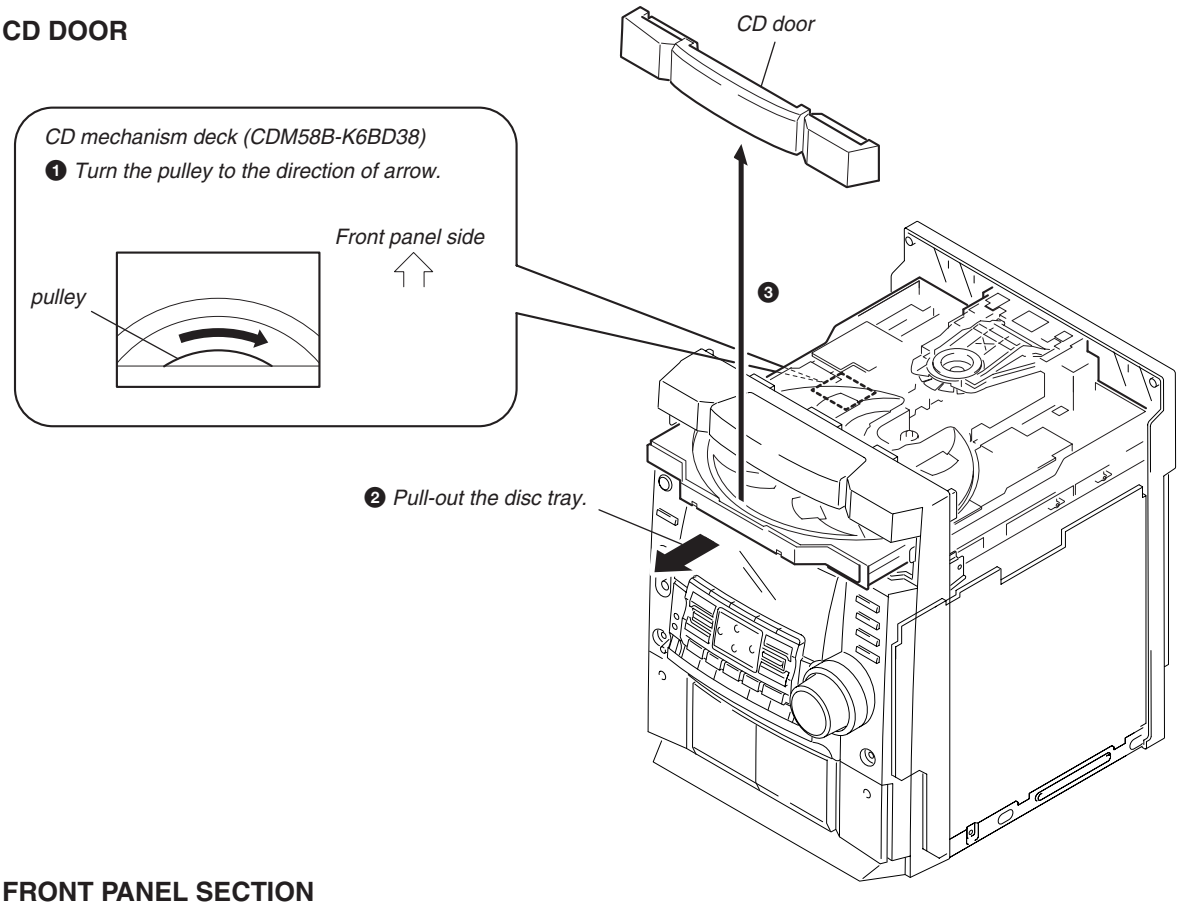


Note : Follow the disassembly procedure in the numerical order given.

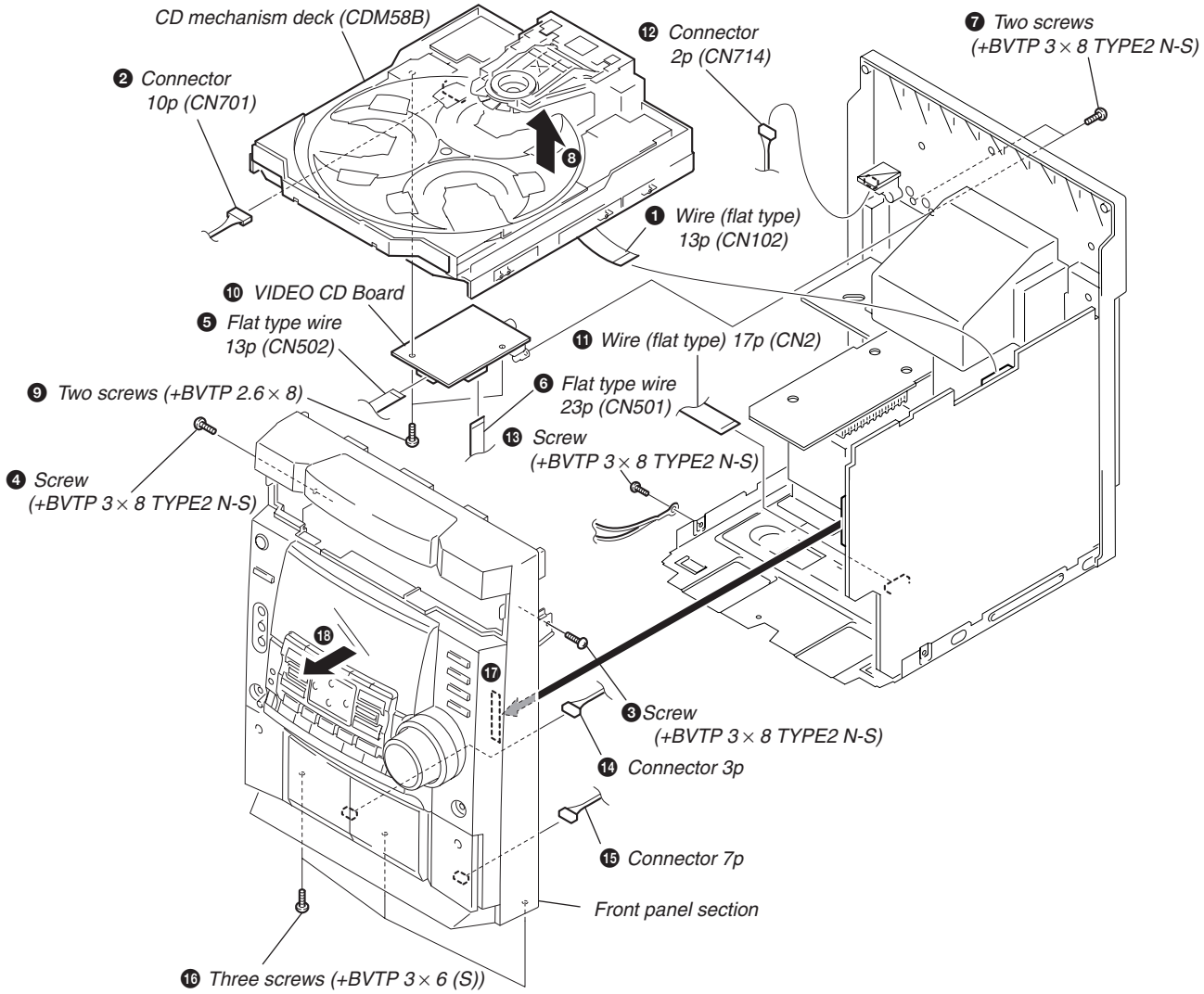
3-1. CASE (TOP)



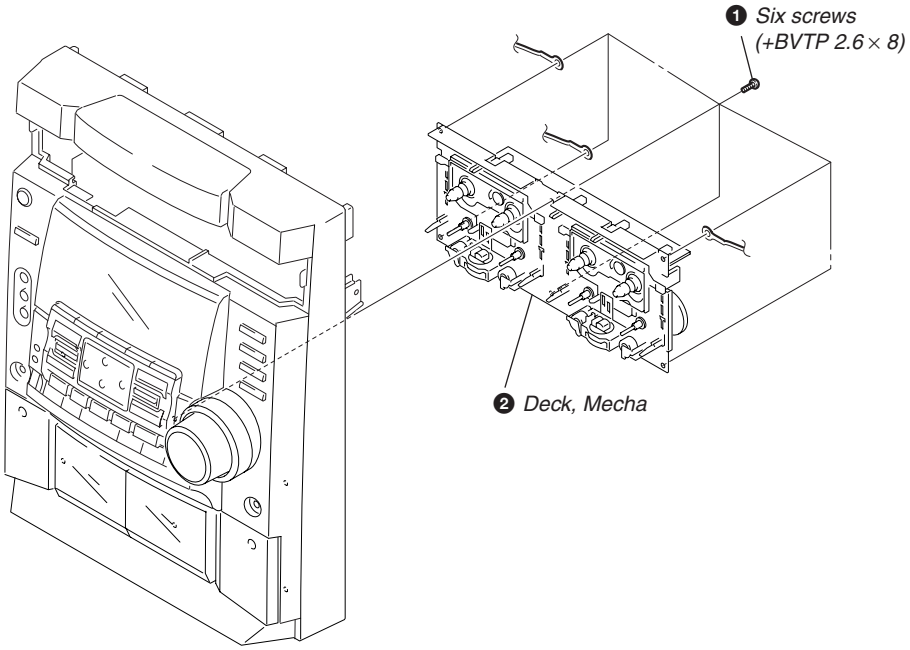
3-2. CD DOOR



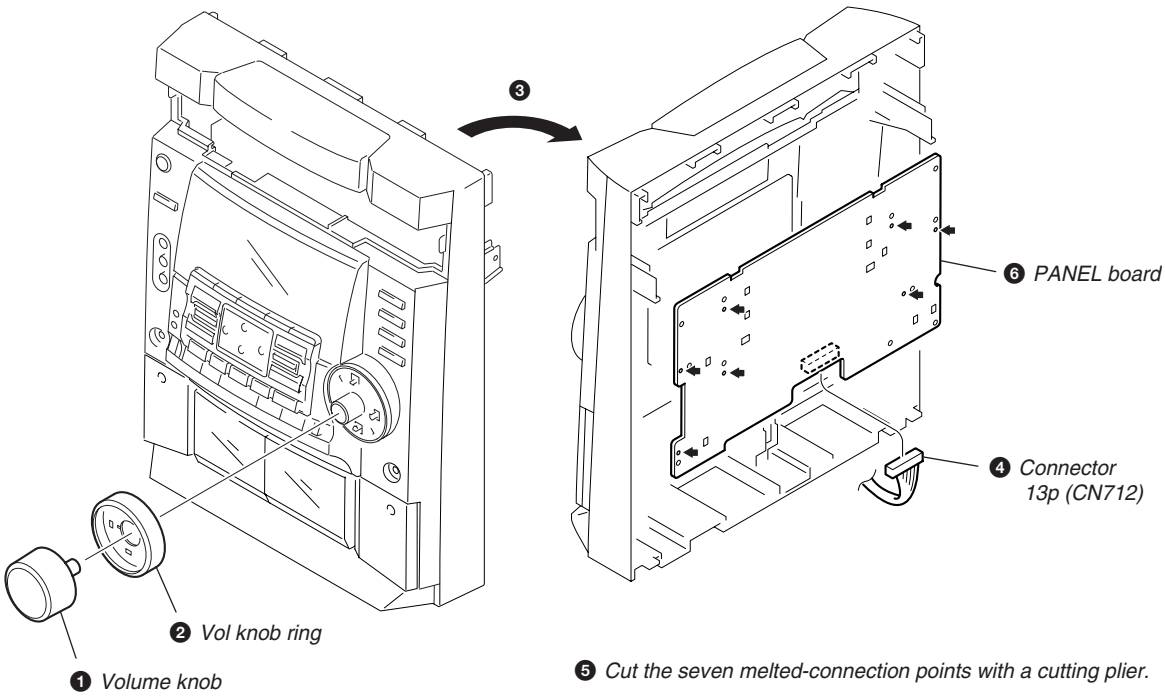
3-3. FRONT PANEL SECTION


CD mechanism deck (CDM58B)
❷ Connector 10p (CN701)
❽
❶ Wire (flat type) 13p (CN102)
⓬ Connector 2p (CN714)
❼ Two screws (+BVTP 3 × 8 TYPE2 N-S)
⓾ VIDEO CD Board
❺ Flat type wire 13p (CN502)
⓫ Wire (flat type) 17p (CN2)
❾ Two screws (+BVTP 2.6 × 8)
❻ Flat type wire 23p (CN501)
⓭ Screw (+BVTP 3 × 8 TYPE2 N-S)
❹ Screw (+BVTP 3 × 8 TYPE2 N-S)
⓲
⓱
❸ Screw (+BVTP 3 × 8 TYPE2 N-S)
⓮ Connector 3p
⓯ Connector 7p
Front panel section
⓰ Three screws (+BVTP 3 × 6 (S))

3-4. TAPE MECHANISM DECK



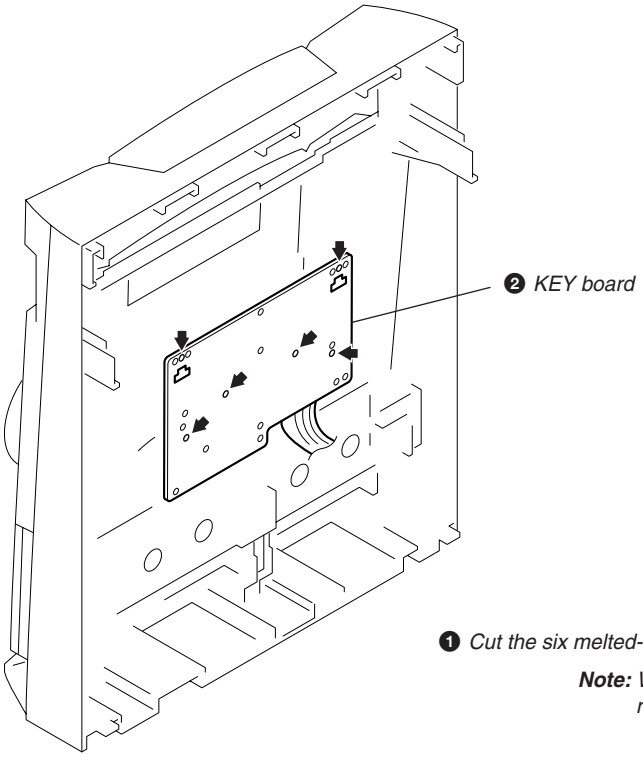
3-5. PANEL BOARD



❺ *Cut the seven melted-connection points with a cutting plier.*

Note: *When attching the panel board, refer to "Service Note" on page 4.*

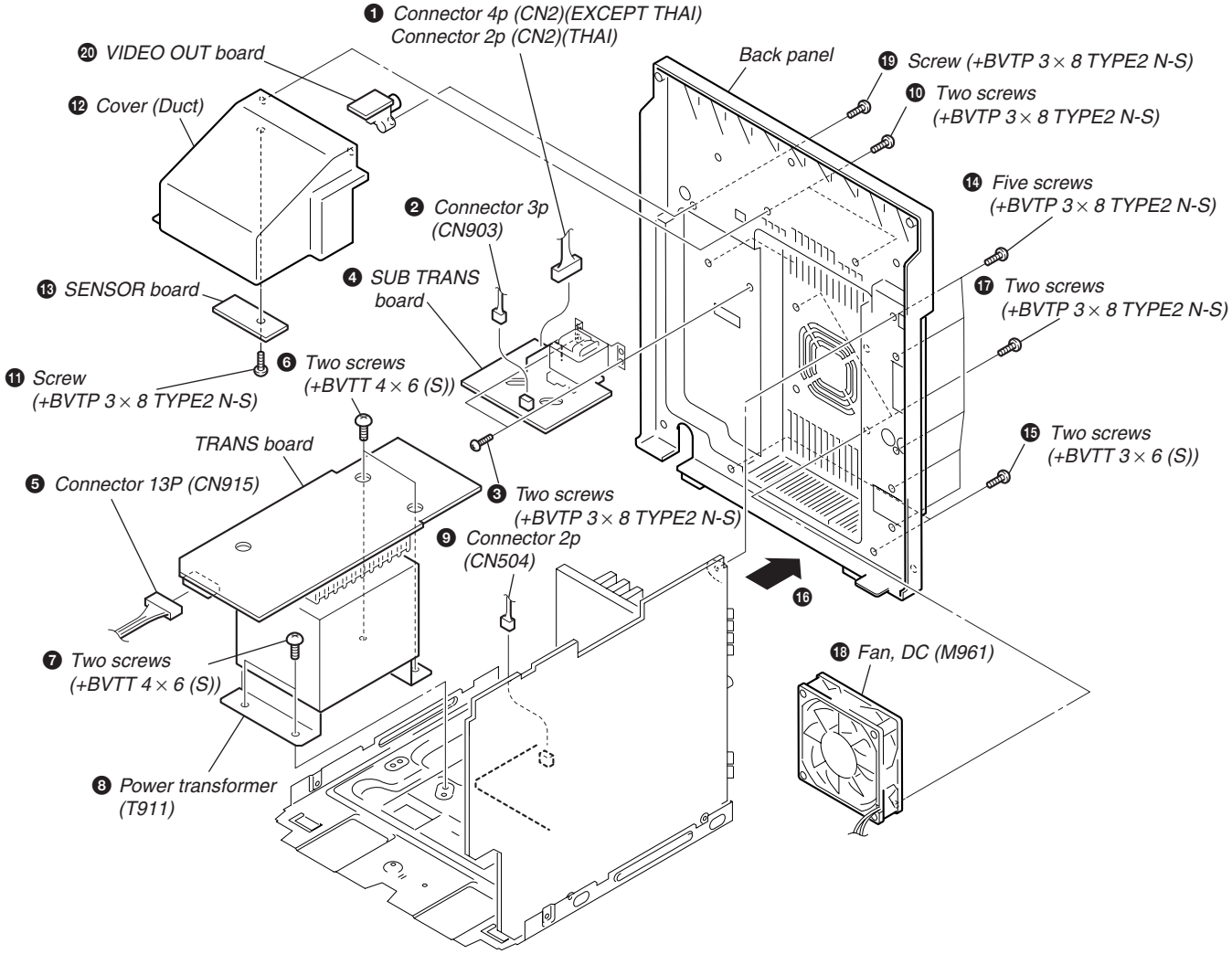
3-6. KEY BOARD



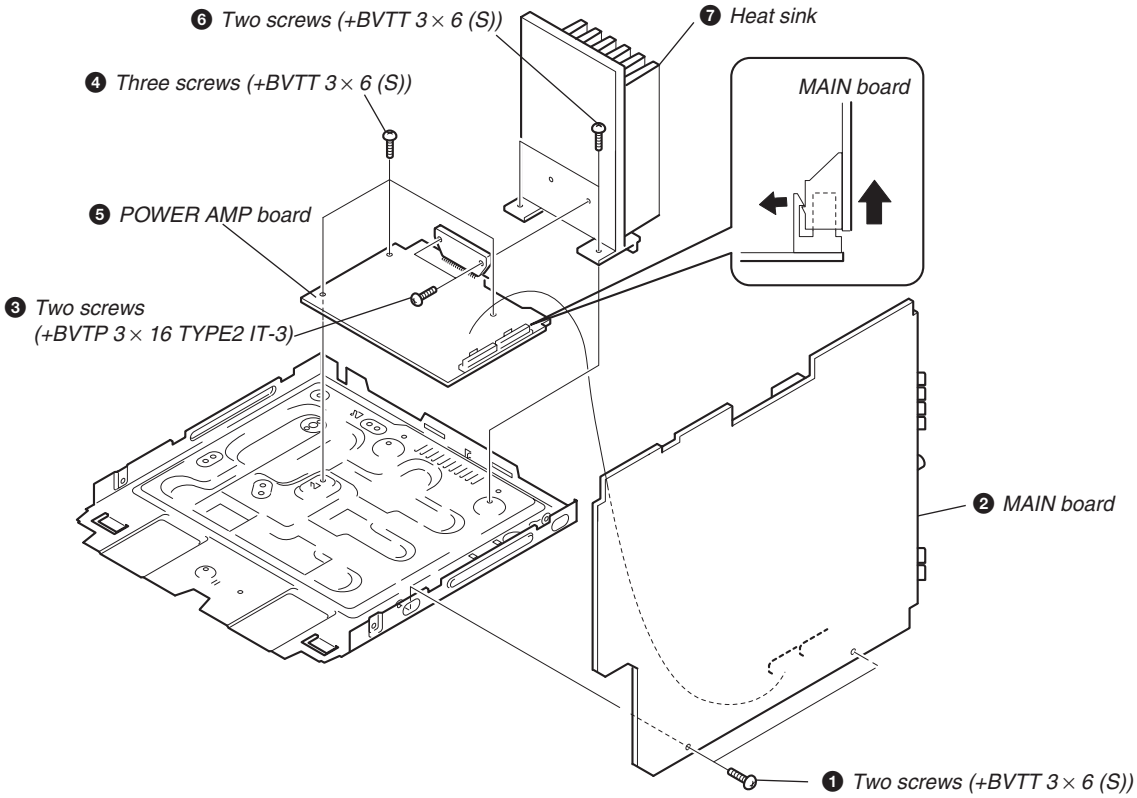
❶ *Cut the six melted-connection points with a cutting plier.*

Note: *When attching the Key board, refer to "Service Note" on page 4.*

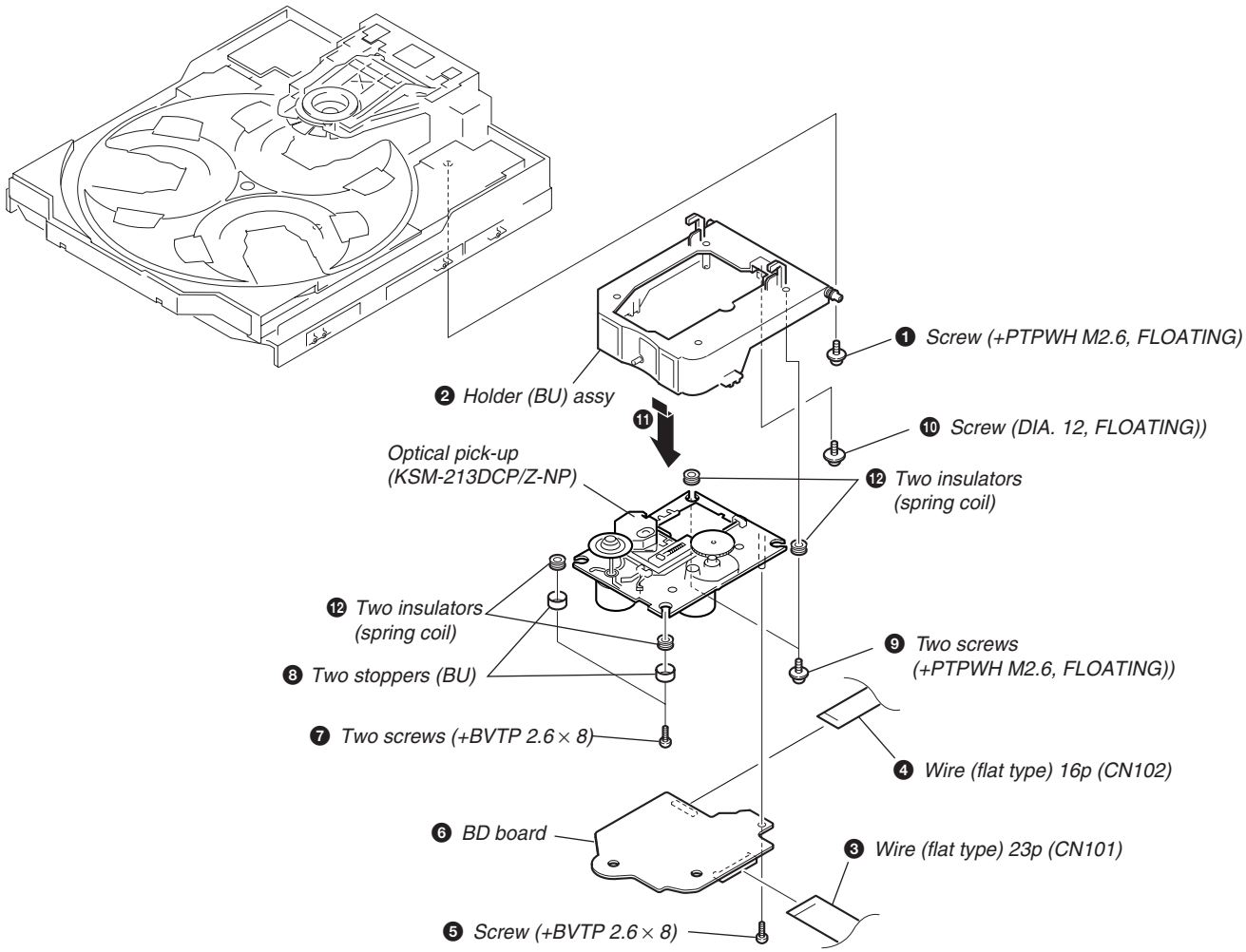
3-7. SUB TRANS BOARD, TRANS BOARD, SENSOR BOARD AND VIDEO OUT BOARD


❶ Connector 4p (CN2)(EXCEPT THAI)
Connector 2p (CN2)(THAI)
⓴ VIDEO OUT board
⓬ Cover (Duct)
Back panel
⓳ Screw (+BVTP 3× 8 TYPE2 N-S)
❿ Two screws (+BVTP 3× 8 TYPE2 N-S)
⓮ Five screws (+BVTP 3× 8 TYPE2 N-S)
❷ Connector 3p (CN903)
❹ SUB TRANS board
⓭ SENSOR board
⓱ Two screws (+BVTP 3× 8 TYPE2 N-S)
⓫ Screw (+BVTP 3× 8 TYPE2 N-S)
❻ Two screws (+BVTT 4× 6 (S))
⓯ Two screws (+BVTT 3× 6 (S))
TRANS board
❺ Connector 13P (CN915)
❸ Two screws (+BVTP 3× 8 TYPE2 N-S)
❾ Connector 2p (CN504)
⓰
⓲ Fan, DC (M961)
❼ Two screws (+BVTT 4× 6 (S))
❽ Power transformer (T911)

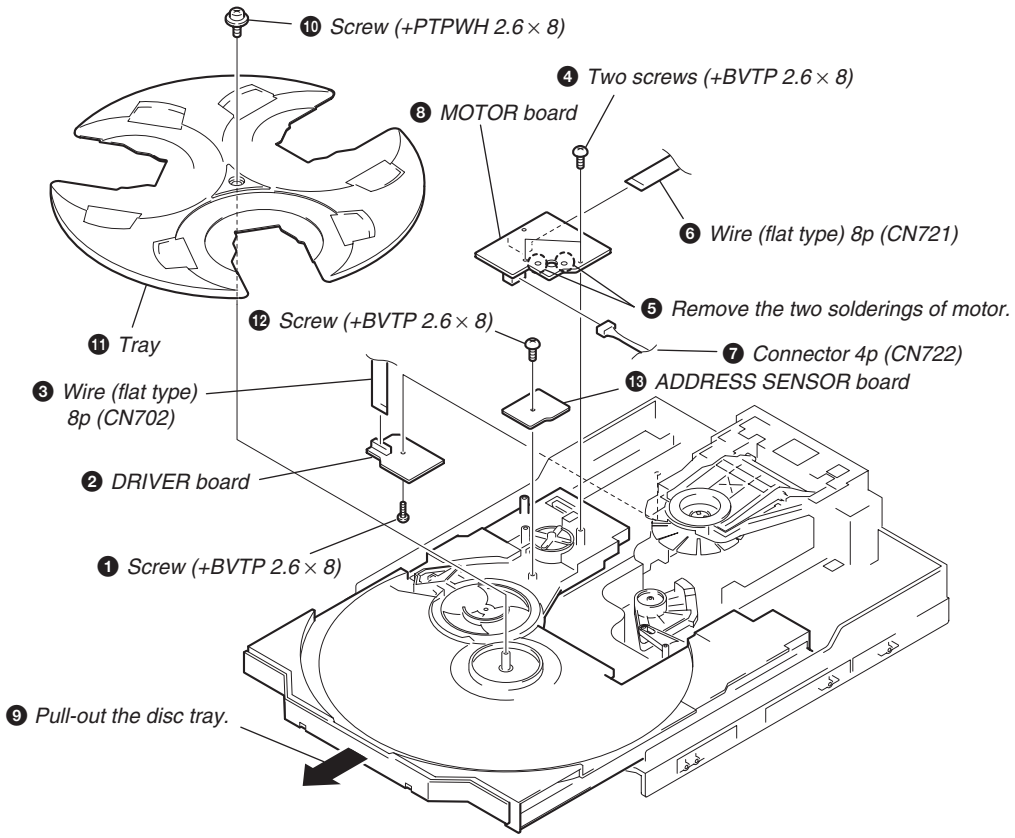
3-8. MAIN BOARD AND POWER BOARD


❻ Two screws (+BVTT 3× 6 (S))
❼ Heat sink
❹ Three screws (+BVTT 3× 6 (S))
MAIN board
❺ POWER AMP board
❸ Two screws
(+BVTP 3× 16 TYPE2 IT-3)
❷ MAIN board
❶ Two screws (+BVTT 3× 6 (S))

3-9. BASE UNIT



3-10. DRIVER BOARD, MOTOR BOARD AND ADDRESS SENSOR BOARD


⑩ Screw (+PTPWH 2.6× 8)
❹ Two screws (+BVTP 2.6× 8)
❽ MOTOR board
❻ Wire (flat type) 8p (CN721)
❺ Remove the two solderings of motor.
⑫ Screw (+BVTP 2.6× 8)
⑪ Tray
❼ Connector 4p (CN722)
⑬ ADDRESS SENSOR board
❸ Wire (flat type) 8p (CN702)
❷ DRIVER board
❶ Screw (+BVTP 2.6× 8)
❾ Pull-out the disc tray.

SECTION 4
TEST MODE

[MC Cold Reset]

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons ■ , ENTER, and I/⏻ simultaneously.
2. The fluorescent indicator tube displays "COLD RESET" and the set is reset.

[CD Ship Mode]

• This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press I/⏻ button to turn the set ON until "STANDBY" appears.
2. Press CD button and I/⏻ button simultaneously.
3. When you releaset he buttons, a message "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

[MC Hot Reset]

• This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons ■ , ENTER, and DISPLAY simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[CD Service Mode]

• This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function "CD".
3. Press three buttons ■, ENTER, and OPEN/CLOSE simultaneously.
4. The CD service mode is selected.
5. With the CD in stop status, press ▶▶ + button to move the pickup to outside track, or press ◀◀ – button to inside track.
6. To exit from this mode, perform as follows:
   1) Move the pickup to the most inside track.
   2) Press three buttons in the same manner as step 2.

Note: • Always move the pickup to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
• Do not run the sled motor excessively, otherwise the gear can be chipped.

[Change-over of AM Tuner Step between 9 kHz and 10 kHz]

• A step of AM channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press I/⏻ button to turn the set ON.
2. Select the function "TUNER", and press TUNER/BAND button to select the BAND "AM".
3. Press I/⏻ button to turn the set OFF.
4. Press ENTER and I/⏻ buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9 k STEP" or "AM 10 k STEP", and thus the channel step is changed over.

[GC Test Mode]

• This mode is used to check the software version, FL tube, LED, keyboard, headphone and volume.

Procedure:

1. Press three buttons ■ , ENTER and DISC 2 simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
3. When ENTER and DISC2 are pressed at the same time, the key number check mode starts up. In this mode, the key numbers of each key series are displayed.
4. In the key check mode, the fluorescent indicator tube displays "KEY 000". Each time a button is pressed.
5. When ENTER and DISC2 are pressed at the same time, the key count check mode starts up. In this mode, the message "KEY CNT @@" is displayed on the FL display tube. When each button is pressed, the key row number is incremented first. Then the key value is then incremented. However, one the button is pressed, the key value cannot be counted.
6. When ENTER and DISC2 are pressed at the same time, the headphones check mode starts up. In this mode, the message "H_P ON" is displayed when the headphones are inserted. When the headphones are not inserted. the message "H_P OFF" is displayed.
7. When ENTER and DISC2 are pressed at the same time, the volume check mode starts up. In this mode, the message "VOLUME FLAT" is displayed on the FL display tube. When the volume control knob is rotated in the positive (+) direction, the message "VOLUME UP" is displayed. When the volume control knob is rotated in the negative (-) direction, the message "VOLUME DOWN" is displayed.
8. In order to quit the mode, either press ENTER and DISC2 at the same time or press the three buttons at the same time as in step 1, or disconnect the power cord.

[MC Test Mode]

• This mode is used to check operations of the respective sections of Amplifier, TUNER, CD and Tape.

Procedure:

1. Press the [I/⏻] button to turn on the set.
2. Press the three buttons of [■], [ENTER] and [DISC 3] simultaneously.
3. A message "TEST MODE" appears on the FL display tube.
   • The messages VACS1 to VACS5 are displayed when the VACS is changed in this mode.
   • The number of repeats of TAPE and CD is set to the infinite number as the default setting.

4 When [▲ (CURSOR UP)] button is pressed, GEQ increases to its maximum and a message "GEQ MAX" appears.

5. When [▼ (CURSOR DOWN)] button is pressed, GEQ decreases to its minimum and a message "GEQ MIN" appears.
6. When [◄ (CURSOR LEFT)] or [► (CURSOR RIGHT)] button is pressed, GEQ is set to flat and a message "GEQ FLAT" appears.
7. In the test mode, the default-preset channel is called even when the TUNER is selected and an attempt is made to call the preset channel that has been stored in memory, by operating the Shuttle knob. (It means that the memory is cleared.)
8. When a tape is inserted in the Deck B and the TAPE B function is selected, and when the [REC PAUSE/START] button is pressed twice, recording starts.
   The VIDEO function is selected automatically as the input source.
9. Select the desired loop by pressing the [PLAY MODE] button in the TAPE B function. Insert a test tape AMS-110A or AMS-RO to Deck A.
10. Press the [SPECTRUM] button to enter the AMS test mode.
11. After a tape is rewound first, the FF AMS is checked, and the mechanism is shut off after detecting the AMS signal twice.
12. Then the REW AMS is checked and the mechanism is shut off after detecting the AMS signal twice.
13. When the check is complete, a message of either OK or NG appears.
14. When the two buttons of [SPECTRUM] and [DISC1] are pressed at the same time in any function modes, either the "VACS ON" display to enable the VACS function or the "VACS OFF" display to disable the VACS function can be selected.
15. When you want to exit this mode, press the [I/⏻] button twice. The cold reset is enforced at the same time.

[Microprocessor version display]

• If the following operation is performed during the POWER OFF in the modes other than the POWER SAVE mode (i.e., while the Demo display shows the watch time),

1. When three buttons of [STOP], [ENTER], [▼ (CUSOR DOWN)] are pressed at the same time, the MC and the GC microprocessor version numbers are displayed as "M1.19 G1.00".
2. When three buttons of [STOP], [ENTER], [▲ (CUSOR UP)] are pressed at the same time, the model name and destination are displayed as "BG2V ASIA3".

[Aging Mode]

This mode can be used for operation check of CD section and tape deck section.

- If an error occurred:
  The aging operation stops and display status.
- If no error occurs:
  The aging operation continues repeatedly.

1. Operating method of Aging Mode

Turn on the main power and select "CD" of the function.

1) Set a disc in DISC1 tray. Select ALL DISC CONTINUE, and REPEAT OFF.
2) Load the tapes recording use into the decks A and B respectively.
3) Press three buttons ■, ENTER, and DISC SKIP EX-CHANGE simultaneously.
4) Aging operations of CD and tape are started at the same time.
5) To exit the aging mode, perform [MC Cold Reset].

3. Aging Mode in CD section

1) Display state

- No error occurs

Display

AGING ✳✳✳✳

Note:

✳✳✳✳ : Number of aging operations

Error display

E ✳✳ □ ## $$ ⁒

① ② ③ ④ ⑤

① ✳✳	The error No. 00 indicates the newest error. As the error No. increases, it means the older error. When you want to retrieve the error history, press the PLAY MODE button in the case of mechanism error. Or press the REPEAT button in the case of NO DISC error.	
② □	M: Mechanism error	D: No disc error
③ ##	Don't care	01: FOCUS ERROR 02: GFS ERROR 03: SETUP ERROR
④ $$	High order digits only D: Stopped during closing due to problems other than mechanism. E: Stopped during opening due to problems other than mechanism. C: Stopped during chucking due to problems other than mechanism. F: Stopped during EX-opening due to problems other than mechanism.	01: NO DISC judgment without chucking retry 02: NO DISC judgment after chucking retry
⑤ ⁒	Emergency related errors (High order digits only) 1: Stopped during chuck-up 2: Stopped during chuck-down 3: Time out by EX-OPEN 5: Time out by EX-CLOSE	Status at the time of NO DISC judgment (High order digits only) 1: STOP 2: SETUP 3: TOC READ 4: ACCESS 5: PLAY BACK 6: PAUSE 7: MANUAL SEARCH (PLAY) 8: MANUAL SEARCH (PAUSE)

- When the buttons ■, ENTER and DISC 1 are pressed simultaneously, number of time of the mechanism error and the NO DISC error can be checked.
  Display: EMC✳✳EDC✳✳ ✳✳: Number of times of error (Maximum three times)
  EMC: Mechanism error
  EDC: NO DISC error

- When aging operation is complete, be sure to perform the MC Cold Reset to reset the error history.

2) Operation during aging mode
In the aging mode, the program is executed in the following sequence.
(1) The disc tray opens and closes.
(2) The mechanism accesses DISC 2 and makes an attempt to read TOC. However, since there are no discs, a message "CD2 NO DISC" appears.
(3) The mechanism accesses DISC 3 and a message "CD3 NO DISC" appears.
(4) The disc tray turns to select a disc1.
(5) A disc is chucked.
(6) TOC of disc is read.
(7) The pickup accesses to the track 1, and playing 2 seconds.
(8) The pickup accesses to the last track, and playing 2 seconds.
(9) Every time when an aging operation of step 1 to step 8 is complete, the display "AGING[*][*][*][*]" value increases as the number of aging operations is counted up.
(10) Returns to step 1.

3. Aging Mode in Tape Deck section
1) Display state
• No error occurs
Display action now
• Error occurred
Display action last time

NO.	Display action	Action contents	Final timing
1	TAPE A AG-6 TAPE B AG-1	Rewind the TAPE A Rewind the TAPE B	The top of tape
2	TAPE A AG-2	FWD play the TAPE A	2 minutes playing
3	TAPE A AG-3	F.F. the TAPE A	20 second FF or the end of tape
4	TAPE A AG-4	REV play the TAPE A	2 minutes playing
5	TAPE A AG-5	Rewind the TAPE A	The top of tape
6	TAPE B AG-2	FWD play the TAPE B	2 minutes playing
7	TAPE B AG-3	F.F. the TAPE B	20 second FF or the end of tape
8	TAPE B AG-4	REV play the TAPE B	2 minutes playing
9	TAPE B AG-5	Rewind the TAPE B	The top of tape

2) Operation during aging mode
In the aging mode, the program is executed in the following sequence.
(1) Rewind is executed up to the top of tape A and B.
(2) A tape on FWD side is played for 2 minutes.
(3) FF is executed up to either made for 20 second or the end of tape.
(4) A tape is reversed, and the tape on REV side is played for 2 minutes.
The tape on the REV side is played in both A and B.
(5) Rewind is executed up to the top of tape.
(6) Returns to step 2, and repeat steps from 2 to 5.

[Function Change Mode]
* Select either VIDEO or MD of the external FUNCTION input.

Procedure:
1. Turn on the power.
2. Press the two buttons [MD (VIDEO)] and [I/⏻] at the same time.
The main power is turned on and the other function of the previous function is selected and displayed. "MD" or "VIDEO".

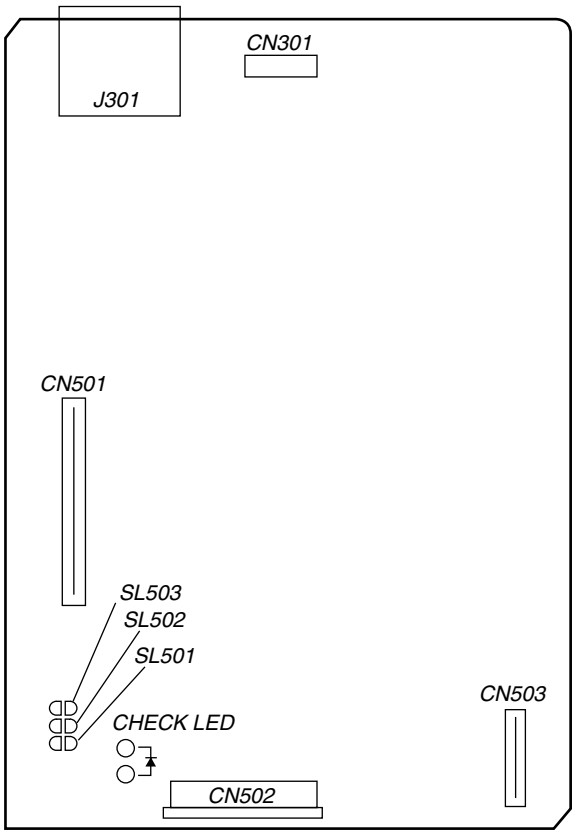
[VIDEO CD Color-bars Mode]
On this mode, the data of the color-bars signal as a picture signal and the 1 kHz sine wave signal as a sound signal are output by the mechanism controller (IC502) for the video CD signal check. When measurement of the voltage and waveform on the VIDEO board, perform it in this mode.
For reference, the color-bars signal can be observed at CN301 (VIDEO OUT) using an oscilloscope.

Procedure:
1. Short the both ends of the land of SL503 of the VIDEO board.
2. Turn the power on. Press the [CD] button to select CD.
3. The color-bars appears when the CD is in stop status, and it disappears when the CD goes in play status.
4. After measuring, remove the lead wire connected.VIDEO board (SIDE B)

[CD Servo ON/OFF Mode]
Procedure:
1. Short SL502 on the VIDEO board by soldering.
2. Turn on the main power. Set a disc on the DISC1 tray. Select CD.
3. Press the [◁▷] button to play back CD.
4. When the [▶▶I +] button is pressed, 100 track jump is executed.
5. Also, every pressing of the [PLAY MODE] button triggers between ON and OFF of TRACKING SERVO and SLED SERVO.

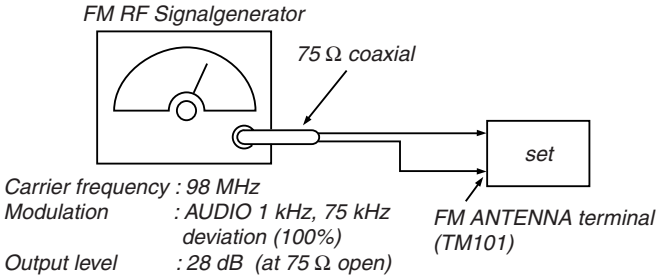
How to quit the CD servo ON/OFF mode:
1. Press the [I/⏻] button to turn off the main power.
2. Remove soldering from SL502.

VIDEO CD board (SIDE A)



SECTION 5
ELECTRICAL ADJUSTMENTS

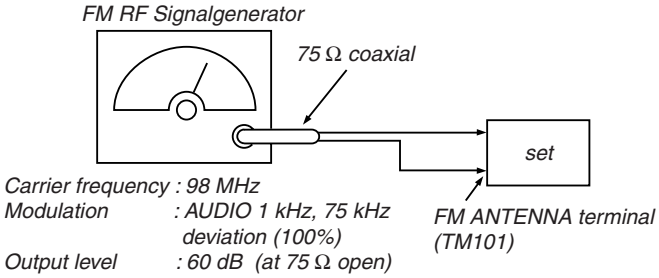
FM Tuned Level Adjustment


FM RF Signalgenerator
75 Ω coaxial
set
Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 28 dB (at 75 Ω open)
FM ANTENNA terminal (TM101)

Procedure:
1. Supply a 98 MHz signal at 28 dB from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust RV101 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: MAIN board

Null Adjustment

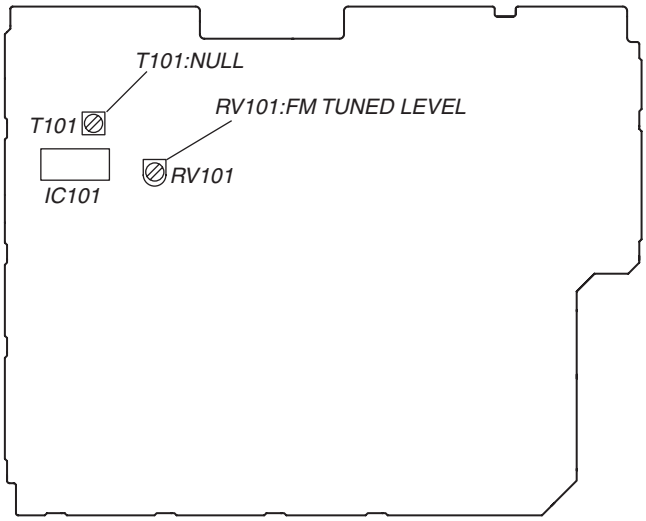

FM RF Signalgenerator
75 Ω coaxial
set
Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 60 dB (at 75 Ω open)
FM ANTENNA terminal (TM101)

Procedure:
1. Supply a 98 MHz signal at 60 dB from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Measure voltage between pin 21 and pin 23 of IC 101. Adjust T101 ubtil the voltage becomes 0 V.

Adjustment Location: MAIN board

Adjustment Location

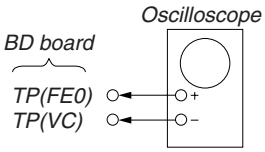
[MAIN BOARD] Component side



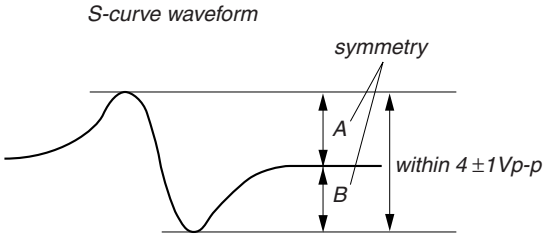
CD SECTION

Note :
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



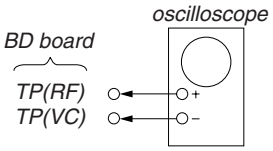
Procedure :
1. Connect oscilloscope to TP (FE0).
2. Connect between TP (FEI) and TP (VC) by lead wire.
3. Connect between TP (AGCCON) and TP (D GND) by lead wire.
4. Turn Power switch on.
5. Load a disc (YEDS-18) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
6. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 4 ±1 Vp-p.



7. After check, remove the lead wire connected in step 2 and 3.

Note :
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

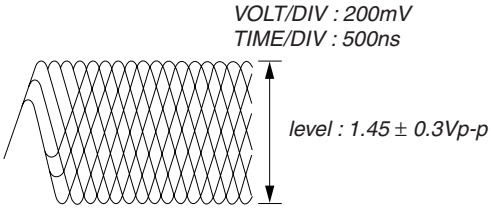
RF Level Check



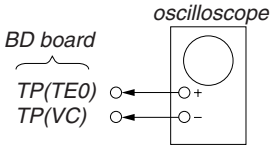
Procedure :
1. Connect oscilloscope to TP (RF).
2. Connect between TP (AGCCON) and TP (D GND) by lead wire.
3. Turned Power switch on.
4. Load a disc (YEDS-18) and playback.
5. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

Note : Clear RF signal waveform means that the shape " ◊ " can be clearly distinguished at the center of the waveform.

RF signal waveform



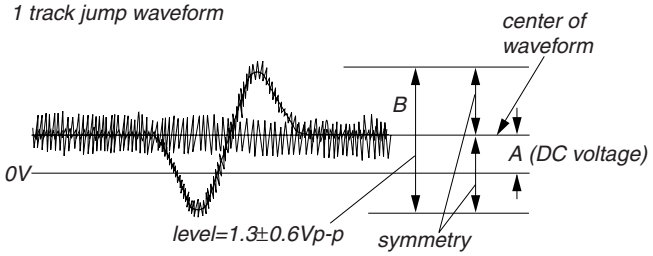
E-F Balance (1 Track jump) Check



Procedure :

1. Connect oscilloscope to TP (TE0) and TP (VC).
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the ⧏⧐ button. (Becomes the 1 track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.

1 track jump waveform

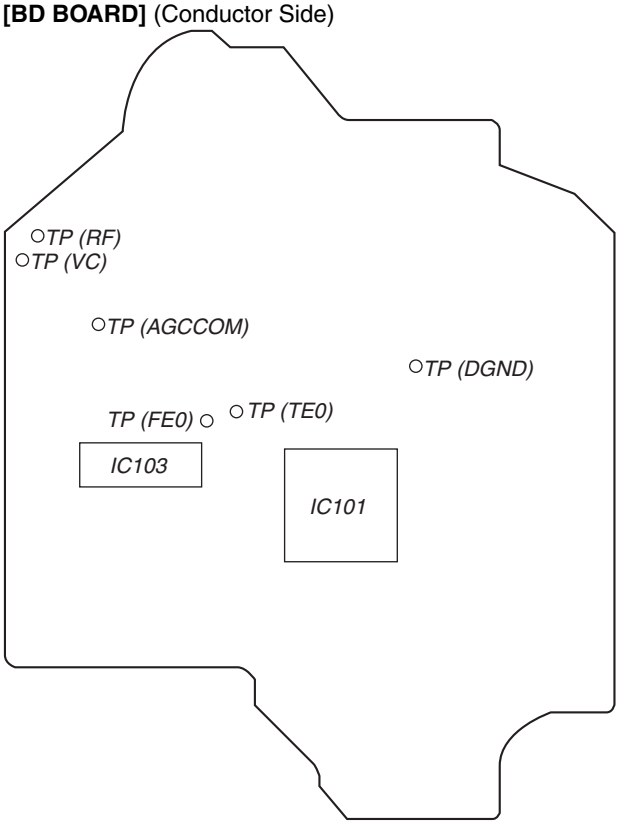


Specified level: $\frac{A}{B} \times 100$=less than ±22%

6. After check, remove the lead wire connected in step 1.

Adjustment Location : BD board

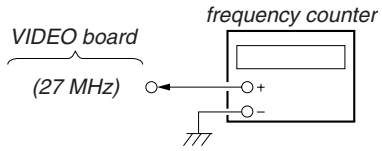
[BD BOARD] (Conductor Side)



VIDEO CD SECTION

Frequency Adjustment

Connection:

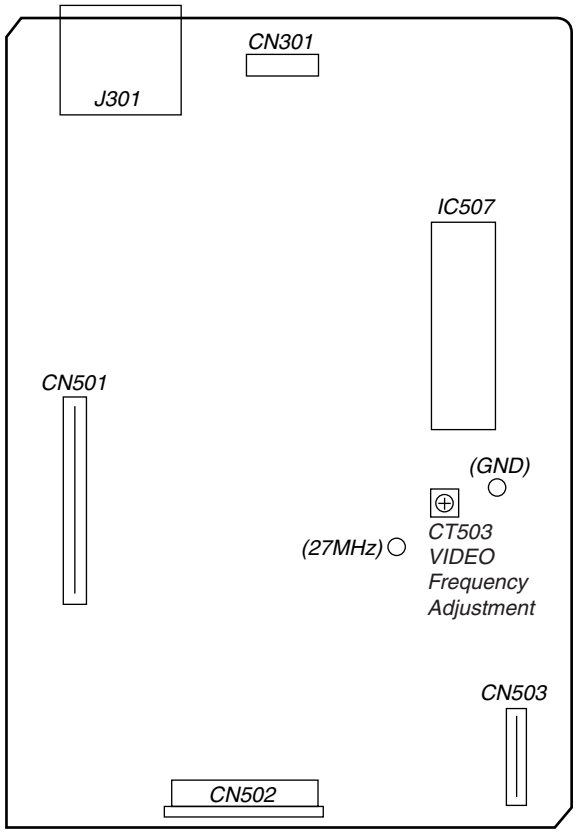


Procedure:

1. Connect the frequency counter to check point of the VIDEO board.
2. Turned power switch on.
3. Press the CD button to select the CD.
4. Adjust CT503 on the VIDEO board so that the frequency counter reading 27.0 MHz ± 80 Hz at stop status.

Adjustment Location : VIDEO CD board

[VIDEO CD BOARD] (Component Side)



SECTION 6
DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. p: pF. 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

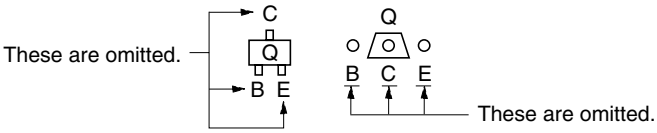
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
  no mark : FM
  ( ) : CD
  [ ] : TAPE
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : PB (DECK A)
  ⇨ : PB (DECK B)
  ⇨ : REC (DECK B)
  ⇨ : CD
  ⇨ : digital out

- Abbreviation
  MY : Malaysia model.
  SP : Singapore model.
  TH : Thai model.
  EA : Saudi Arabia model.
  JE : Tourist model.
  IA : Indonesian model.
  TW : Taiwan model.

Note on Printed Wiring Boards:

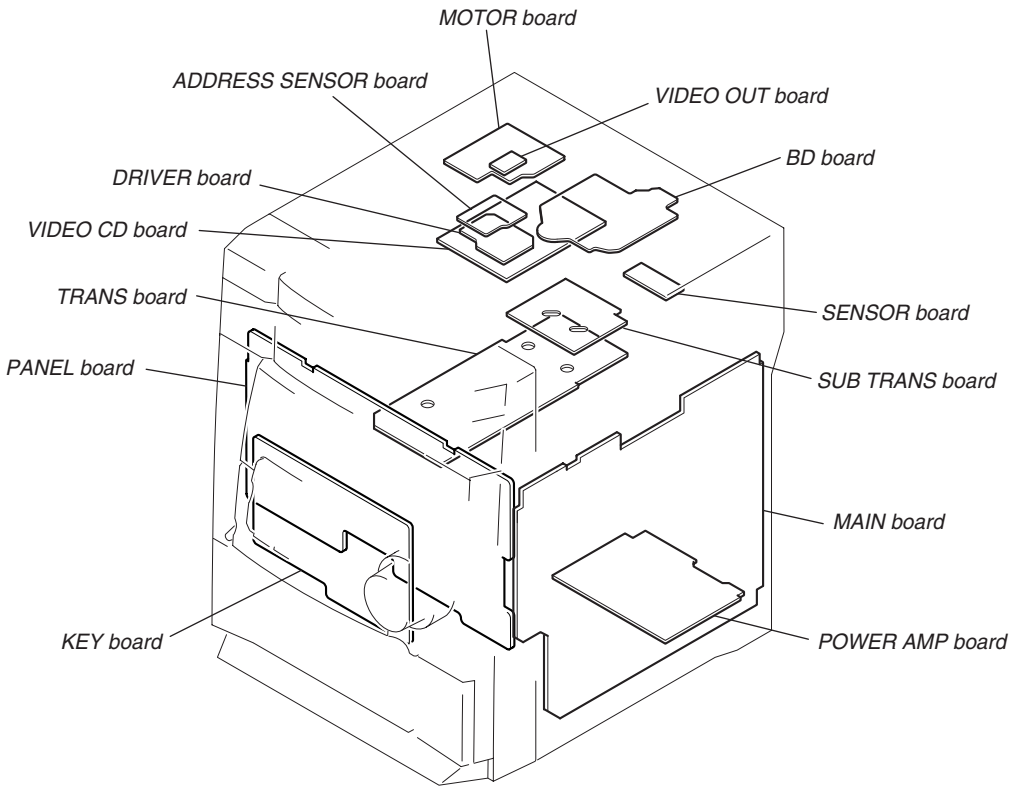
- o——— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.
- Indication of transistor.



- Abbreviation
  MY : Malaysia model.
  SP : Singapore model.
  TH : Thai model.
  EA : Saudi Arabia model.
  JE : Tourist model.
  IA : Indonesian model.
  TW : Taiwan model.

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

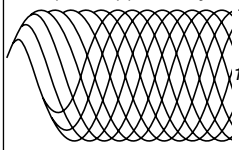
6-1. CIRCUIT BOARD LOCATION



• WAVEFORMS

– BD BOARD –

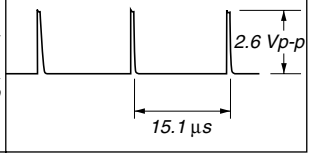
① IC101 ㊿ (RFAC)(CD Play mode)



③ IC101 ㊴ (FE)(CD Play mode)

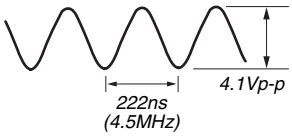
② IC101 ㊶ (TE)(CD Play mode)

④ IC101 ㉕ (MDP)

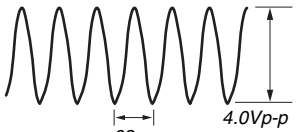


– MAIN BOARD –

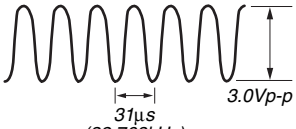
① IC102 ㉔ (X OUT)



② IC401 ⑬ (X OUT)

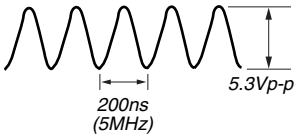


③ IC401 ⑪ (X OUT)



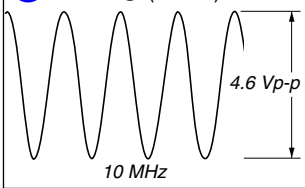
– PANEL BOARD –

① IC701 ④ (X 2)

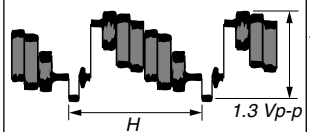


– VIDEO CD BOARD –

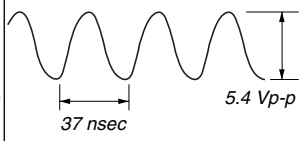
① IC502 ⑬ (XOUT)



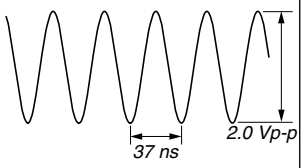
⑤ CN301 ② (VIDEO OUT)



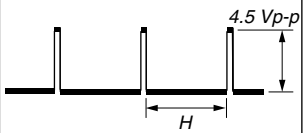
⑨ IC505 ⑯ (VCK-IN)



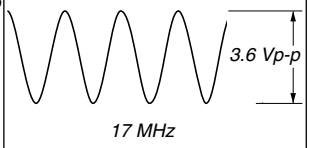
⑬ IC509 ㉔ (XT2)



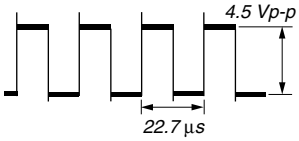
② IC502 ㉖ (BGP)



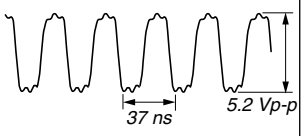
⑥ IC505 ㊱ (DA-XCLK)



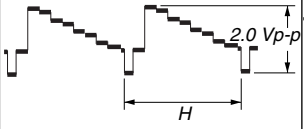
⑩ IC505 ⑱ (DA-LRCK)



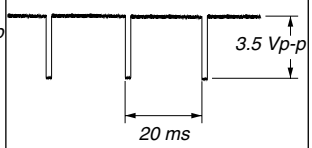
⑭ IC509 ④ (MCKO)



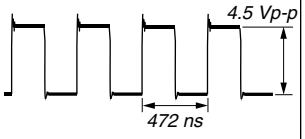
③ J301 ④ (YOUT)



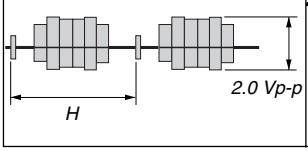
⑦ IC505 ㉝ (VSYNC)



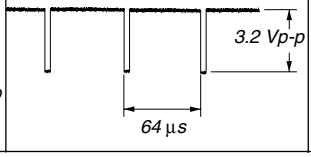
⑪ IC505 ⑪ (DA-BCK)



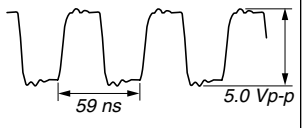
④ J301 ③ (COUT)



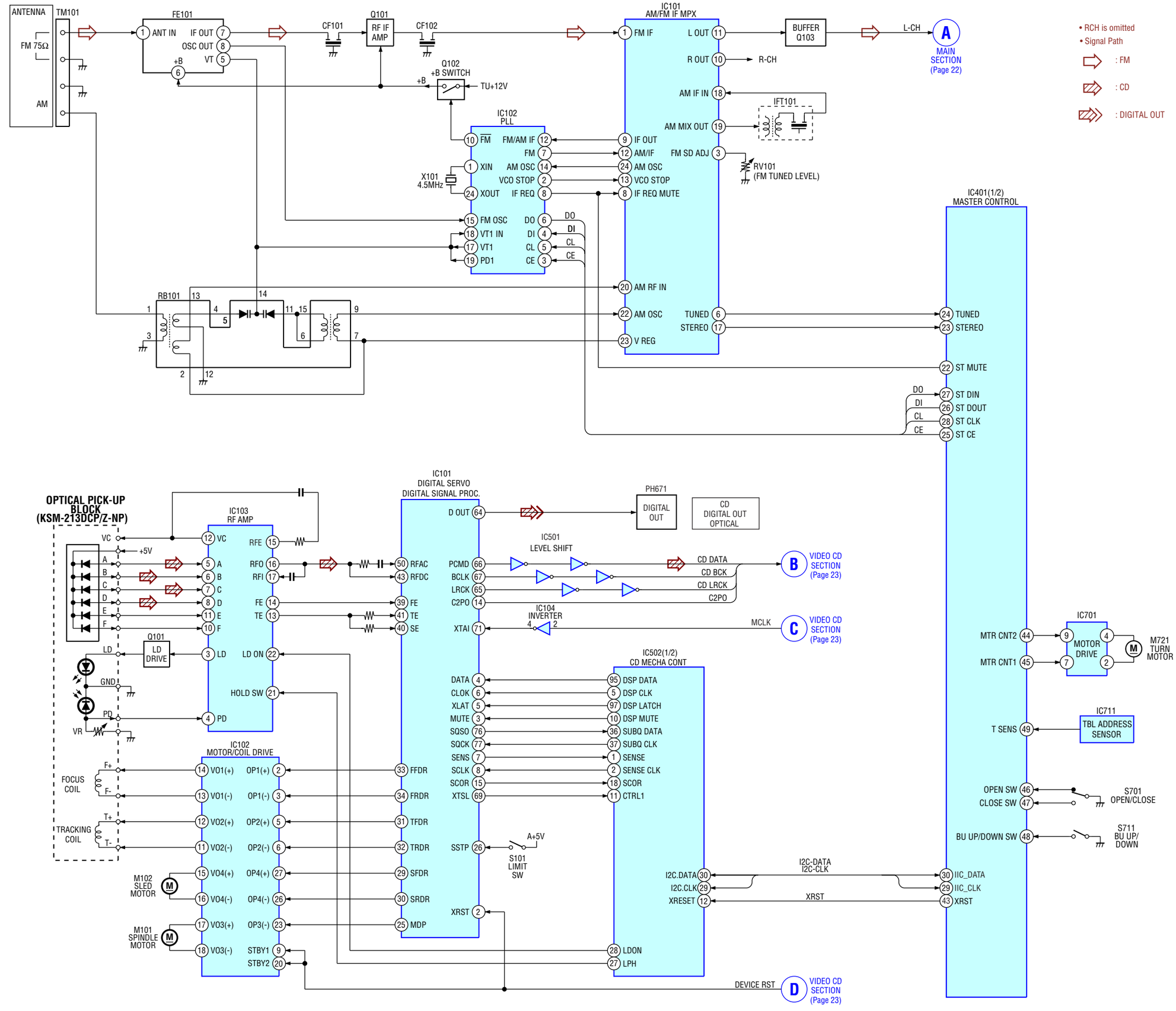
⑧ IC505 ⑱ (HSYNC)



⑫ IC509 ⑳ (384FSO)

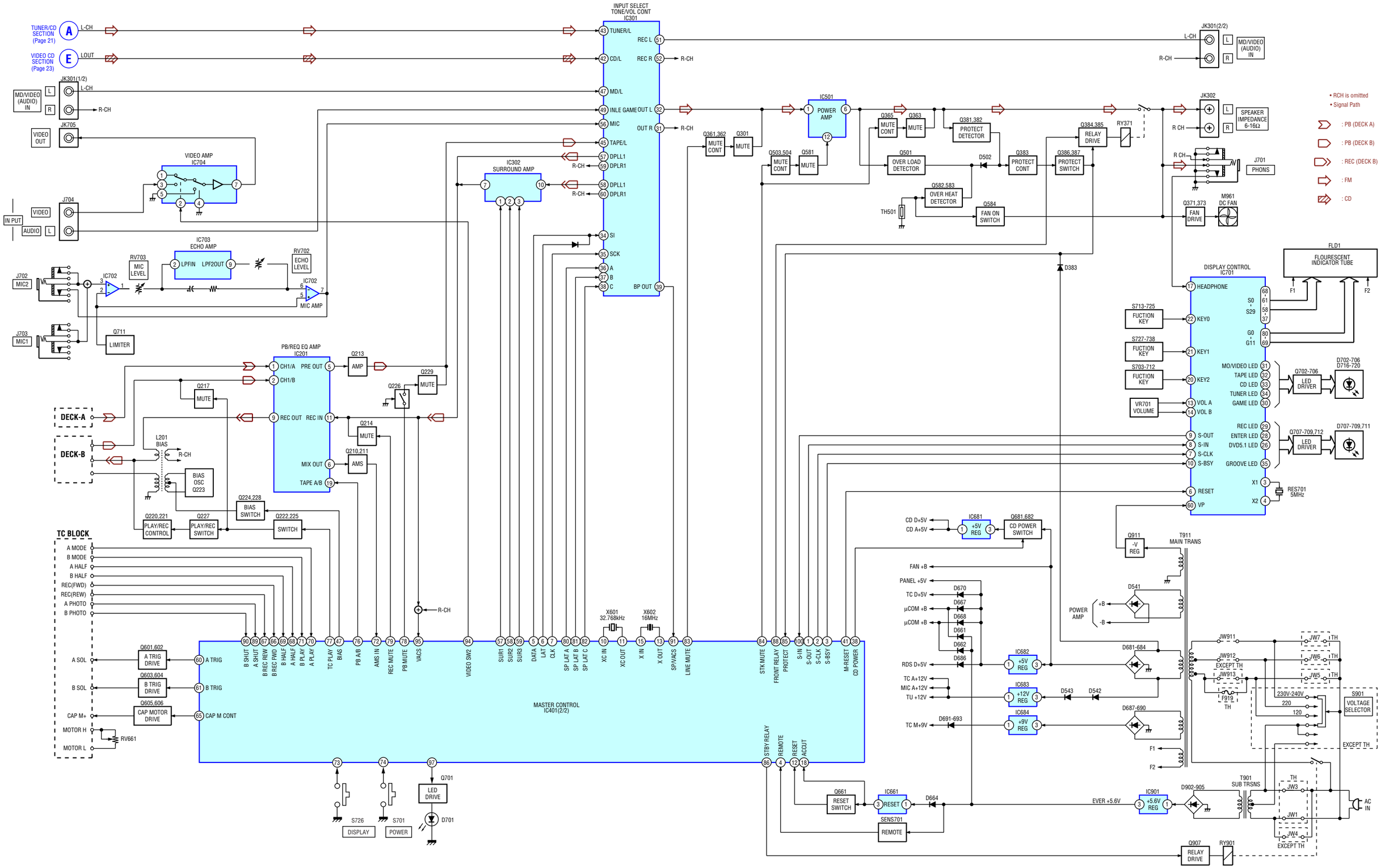


6-2. BLOCK DIAGRAMS
TUNER/CD SECTION

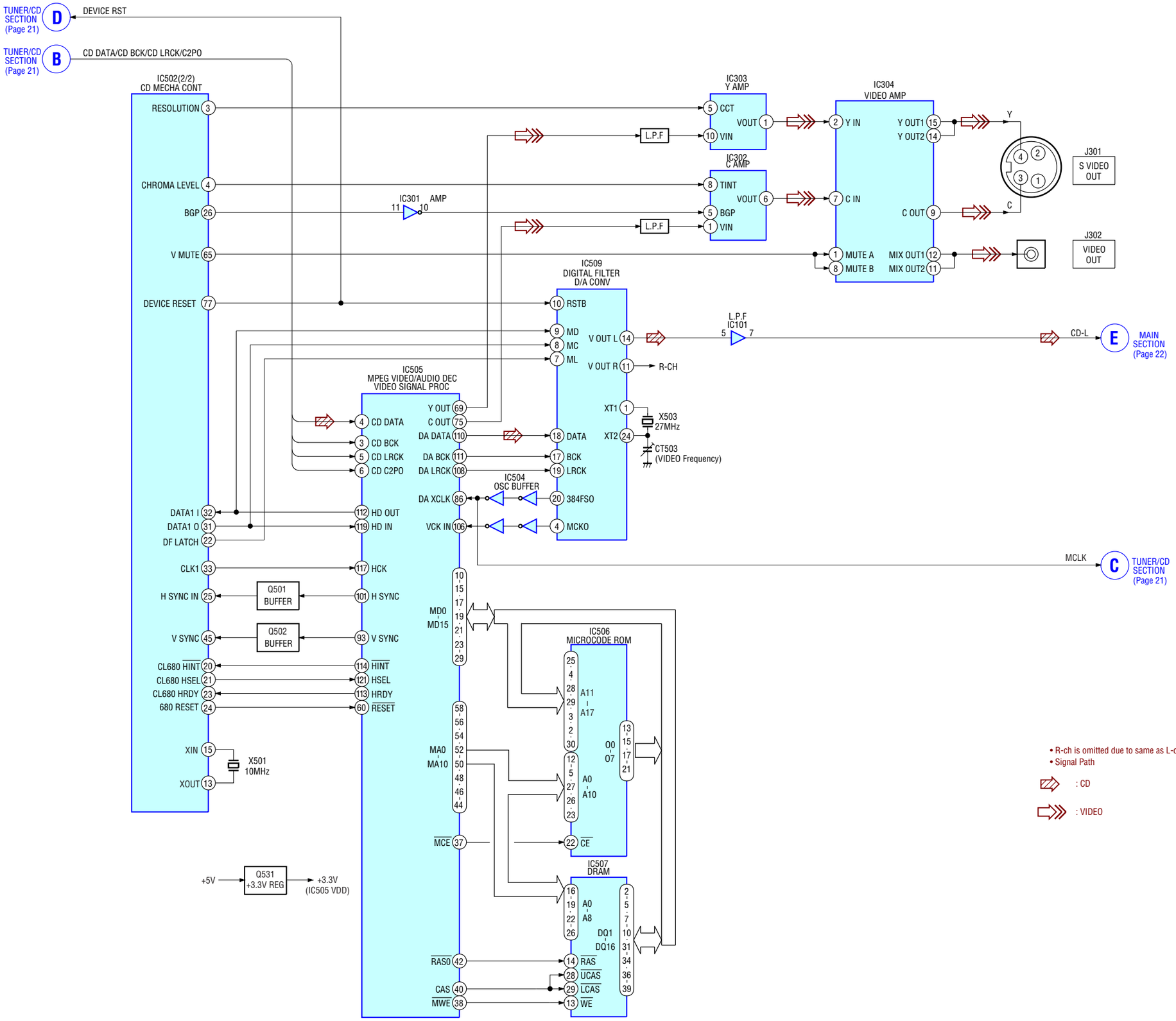


HCD-VX333

MAIN SECTION



VIDEO CD SECTION



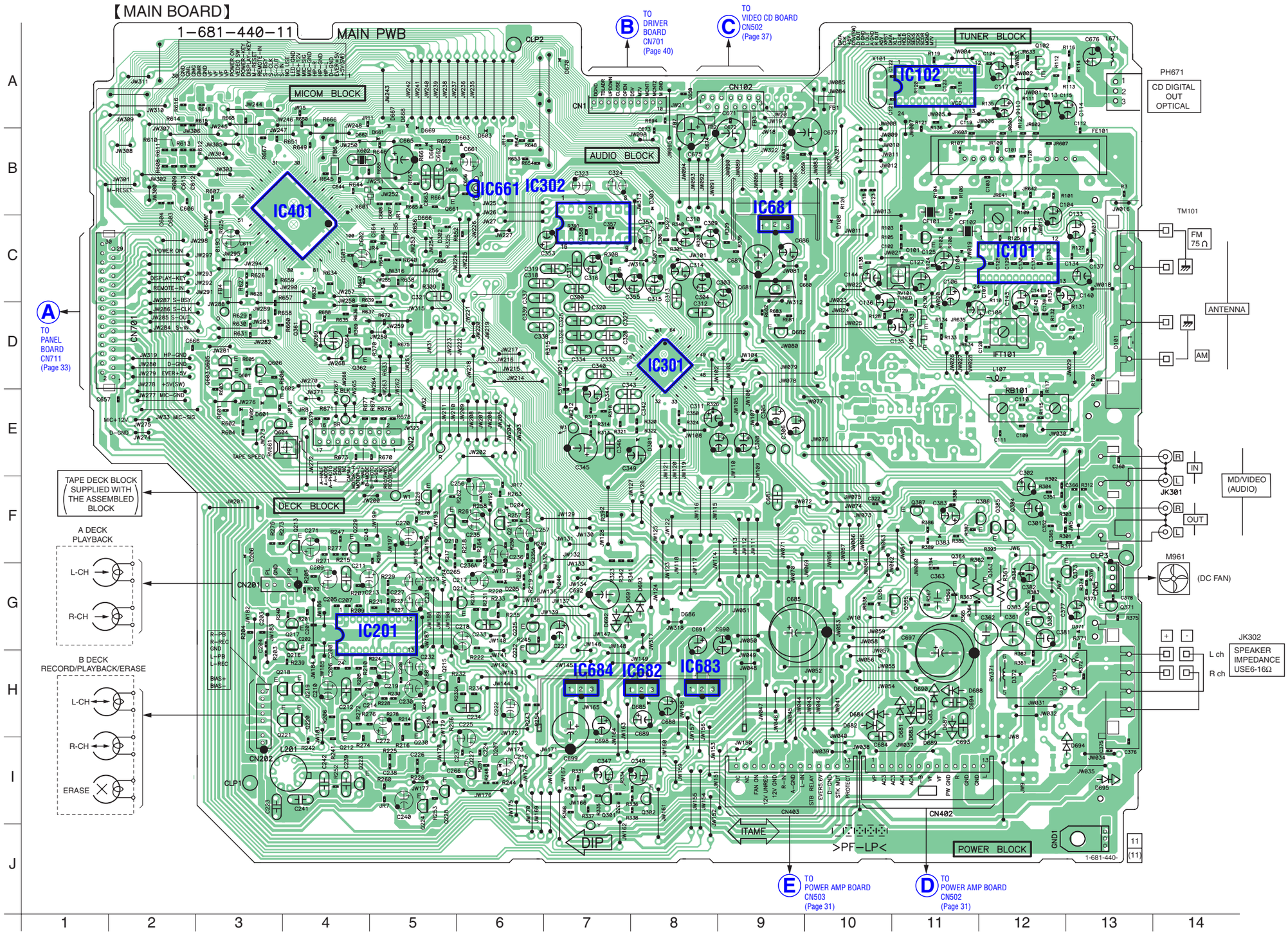
- R-ch is omitted due to same as L-ch.
- Signal Path

: CD

: VIDEO

6-3. PRINTED WIRING BOARD MAIN BOARD

• See page 19 for Circuit Boards Location.

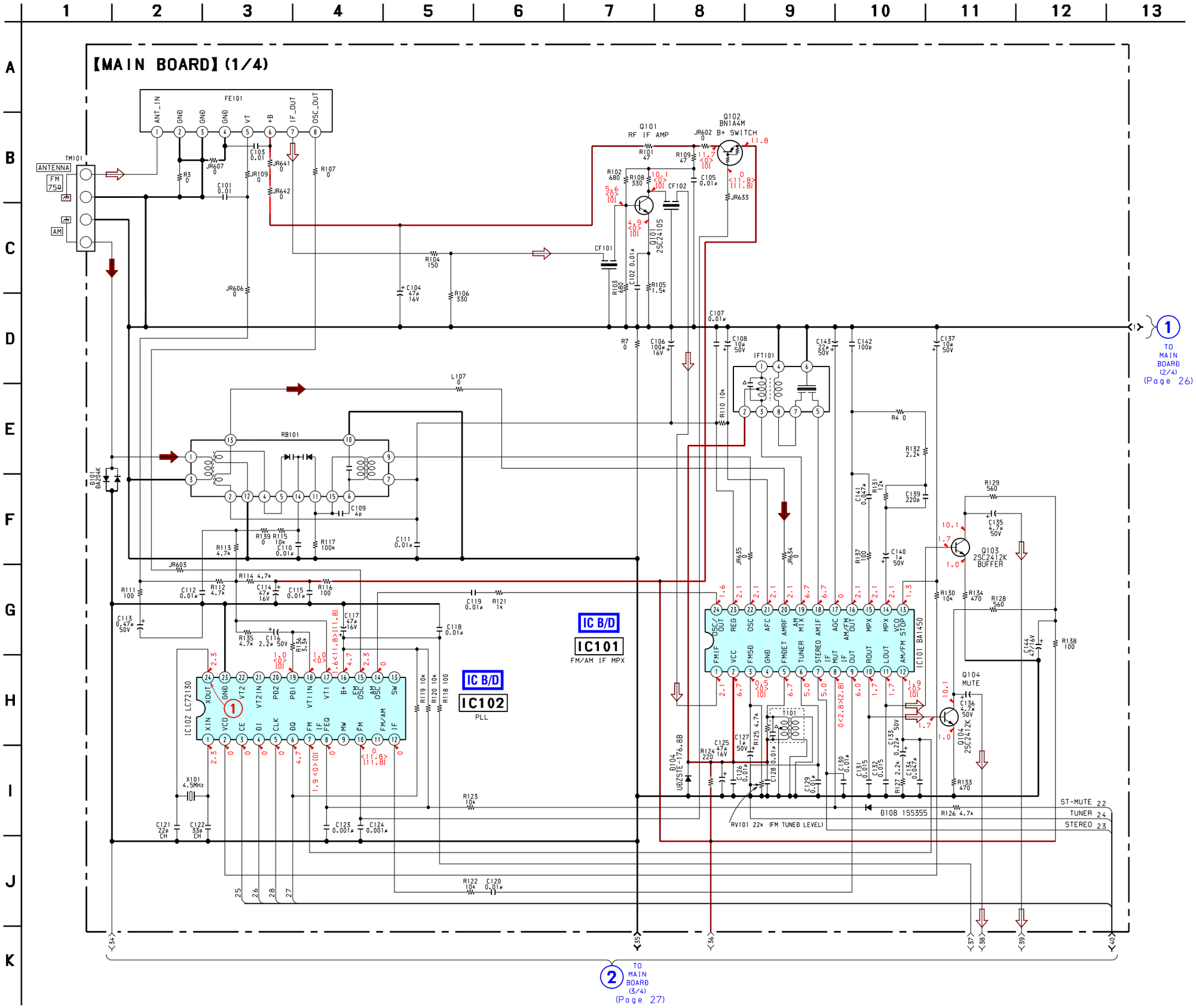


• Semiconductor Location

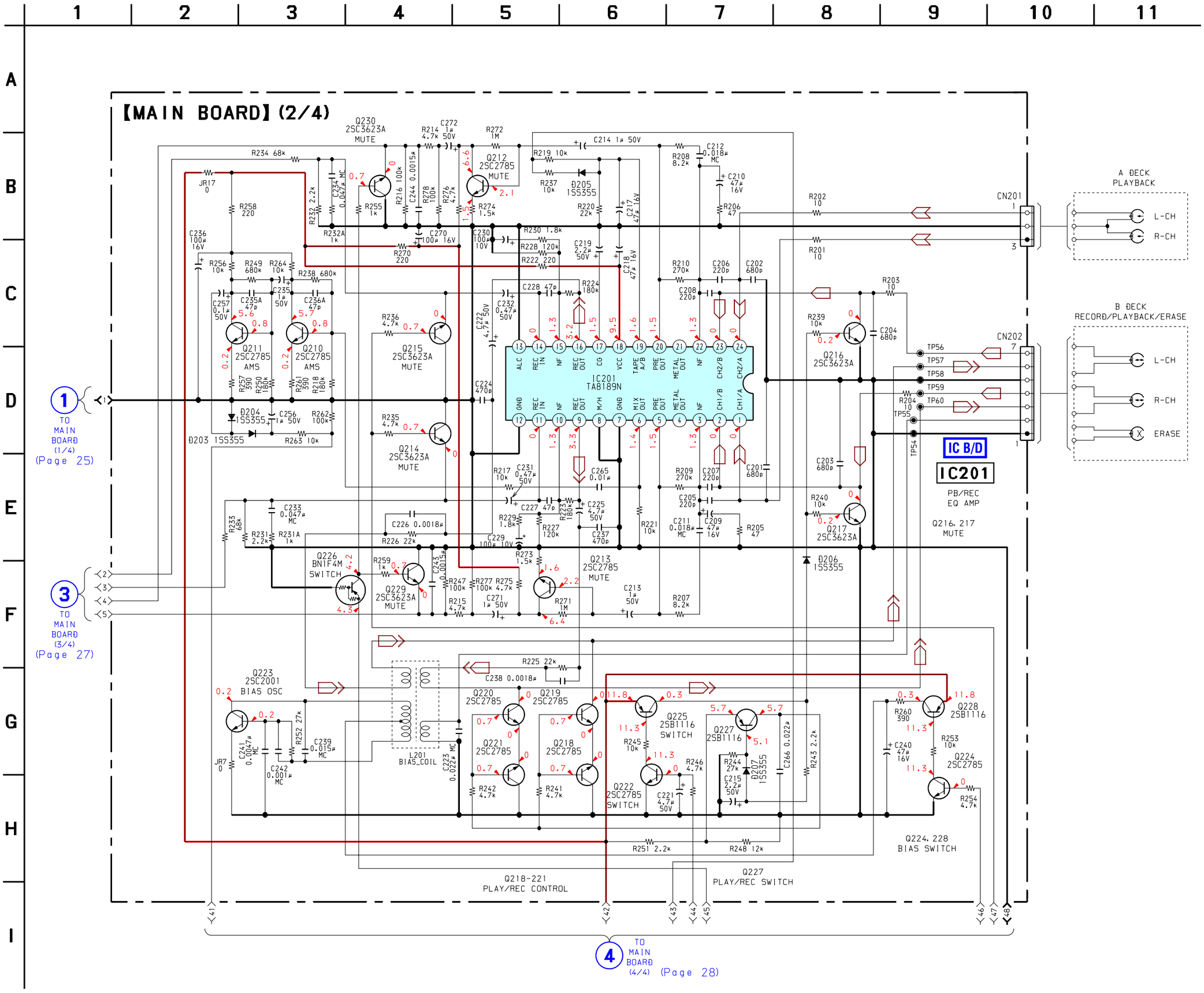
Ref. No.	Location	Ref. No.	Location
D101	D-13	Q101	C-11
D104	C-11	Q102	A-12
D108	C-10	Q103	D-11
D203	F-6	Q104	D-11
D204	F-6	Q210	F-5
D205	G-6	Q211	F-6
D206	F-3	Q212	H-4
D207	I-6	Q213	F-4
D301	E-8	Q214	G-6
D302	C-5	Q215	H-5
D303	B-8	Q216	H-4
D361	G-10	Q217	G-4
D371	G-13	Q218	H-4
D372	H-12	Q219	H-4
D374	H-13	Q220	H-4
D383	F-11	Q221	H-4
D601	E-3	Q222	G-6
D602	E-3	Q223	I-4
D603	B-6	Q224	I-5
D661	B-5	Q225	G-6
D662	B-4	Q226	F-5
D663	B-6	Q227	I-6
D664	B-5	Q228	I-5
D665	B-5	Q229	F-4
D666	B-5	Q230	H-5
D667	A-5	Q301	I-7
D668	A-5	Q302	I-8
D669	A-5	Q361	D-4
D670	A-7	Q362	D-4
D681	H-11	Q363	G-12
D682	H-10	Q364	G-11
D683	H-11	Q365	G-11
D684	H-10	Q371	G-13
D685	H-8	Q373	G-12
D686	G-8	Q381	G-12
D687	H-11	Q382	G-12
D688	H-11	Q383	G-12
D689	H-11	Q384	F-12
D690	H-11	Q385	F-12
D691	G-7	Q386	F-12
D692	G-7	Q387	F-11
D693	G-8	Q601	E-3
D694	I-13	Q602	E-3
D695	I-13	Q603	D-3
		Q604	E-3
IC101	C-12	Q605	D-3
IC102	A-11	Q606	D-3
IC201	G-4	Q661	B-5
IC301	D-8	Q681	C-9
IC401	C-4	Q682	D-9
IC661	B-6		
IC681	C-9		
IC682	H-8		
IC683	H-8		
IC684	H-7		

6-4. SCHEMATIC DIAGRAM MAIN BOARD (1/4)

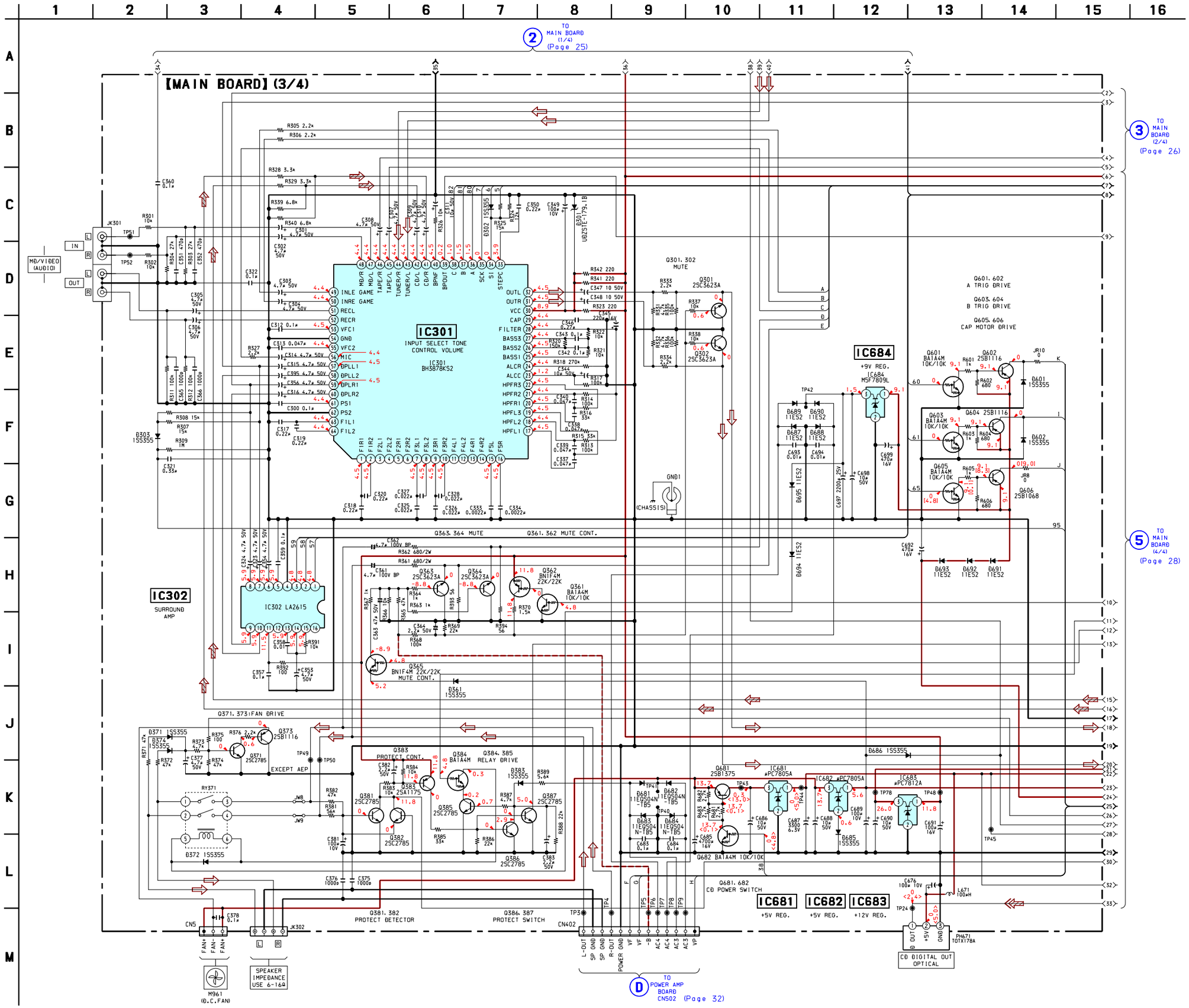
• See page 20 for Waveforms. • See page 48 for IC Block Diagrams.



6-5. SCHEMATIC DIAGRAM MAIN BOARD (2/4) • See page 49 for IC Block Diagrams.

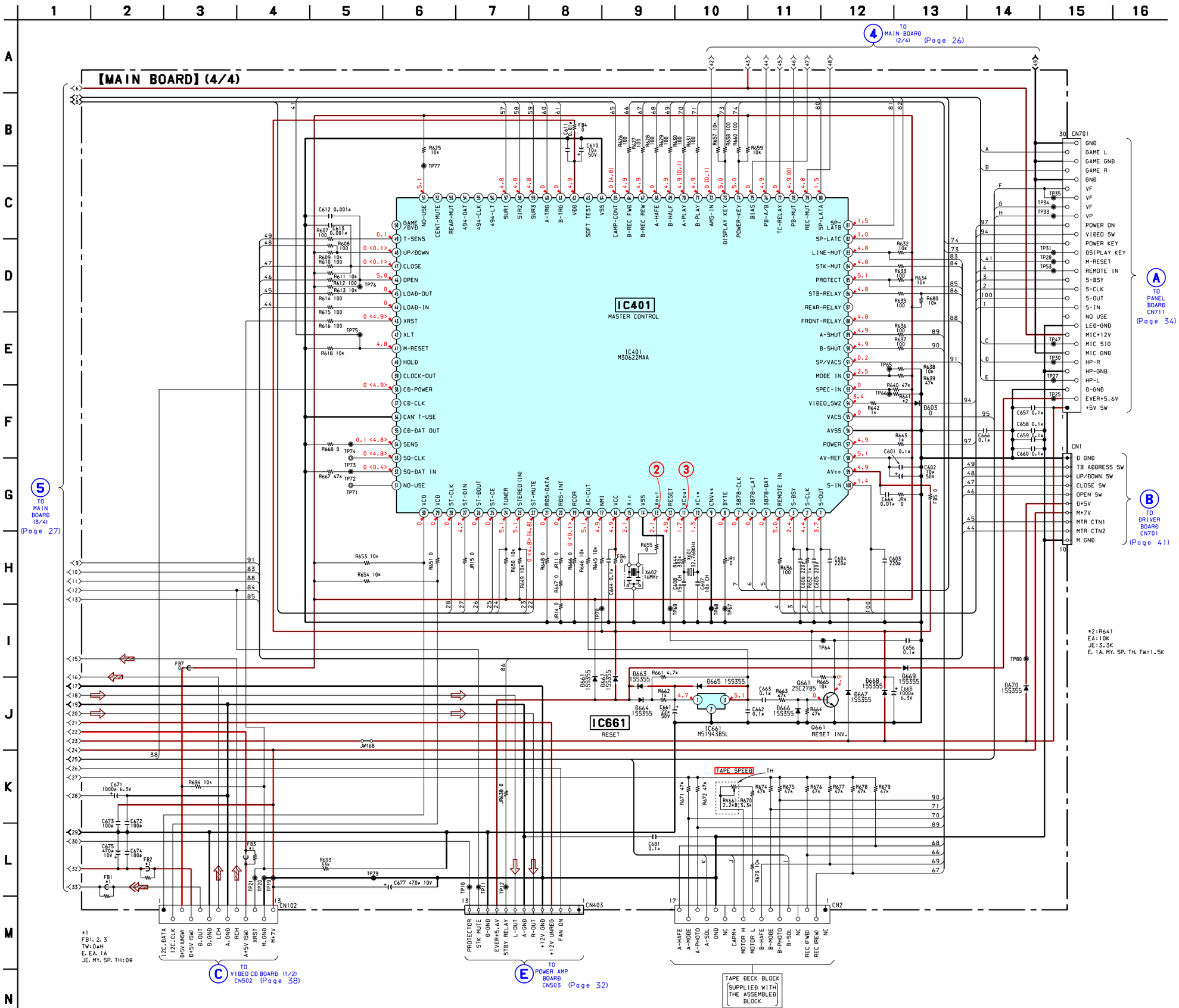


6-6. SCHEMATIC DIAGRAM MAIN BOARD (3/4)



6-7. SCHEMATIC DIAGRAM MAIN BOARD (4/4)

• See page 20 for Wavefoms. • See page 44 for IC Pin Function Description.

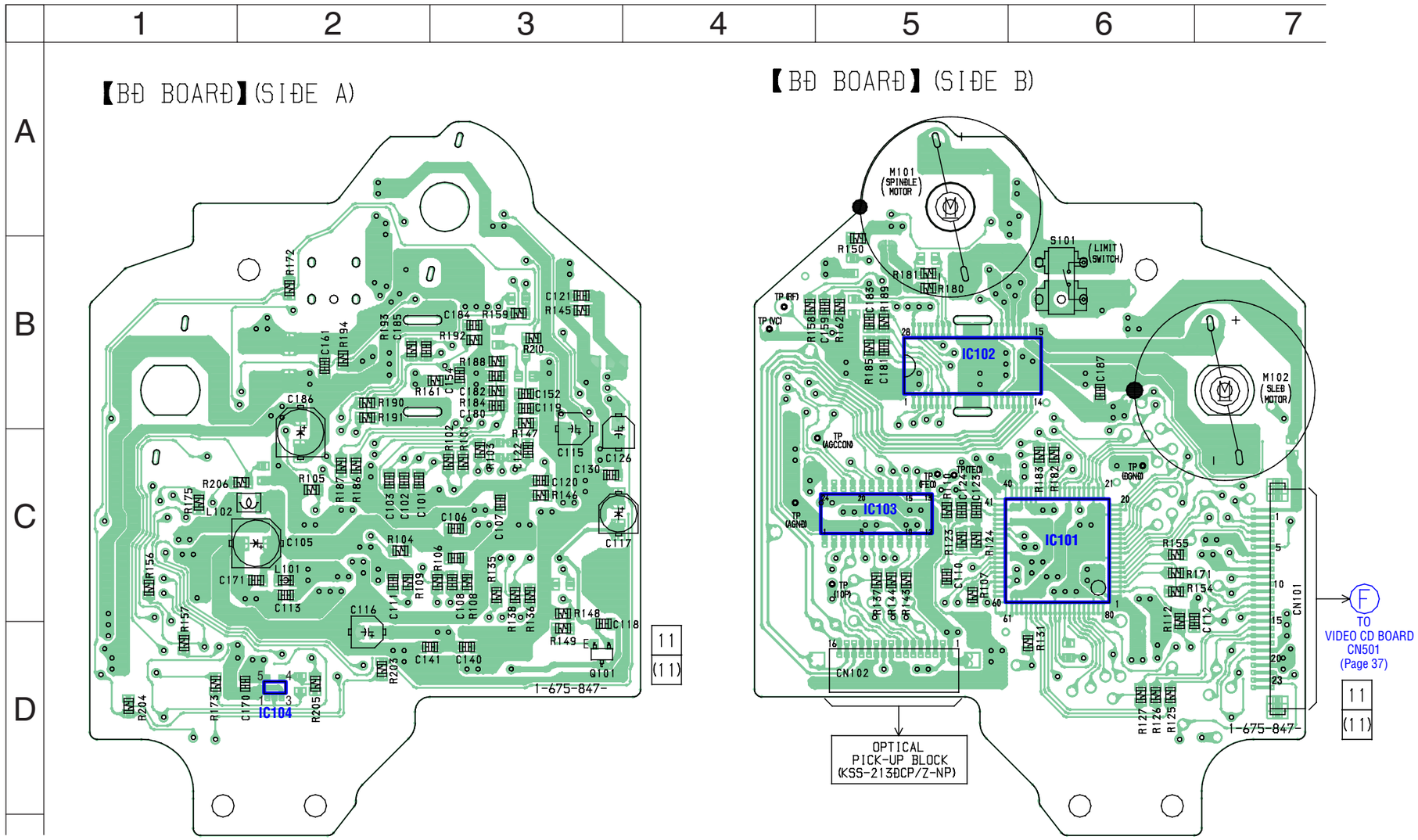


6-8. PRINTED WIRING BOARD BD BOARD

• See page 19 for Circuit Boards Location.

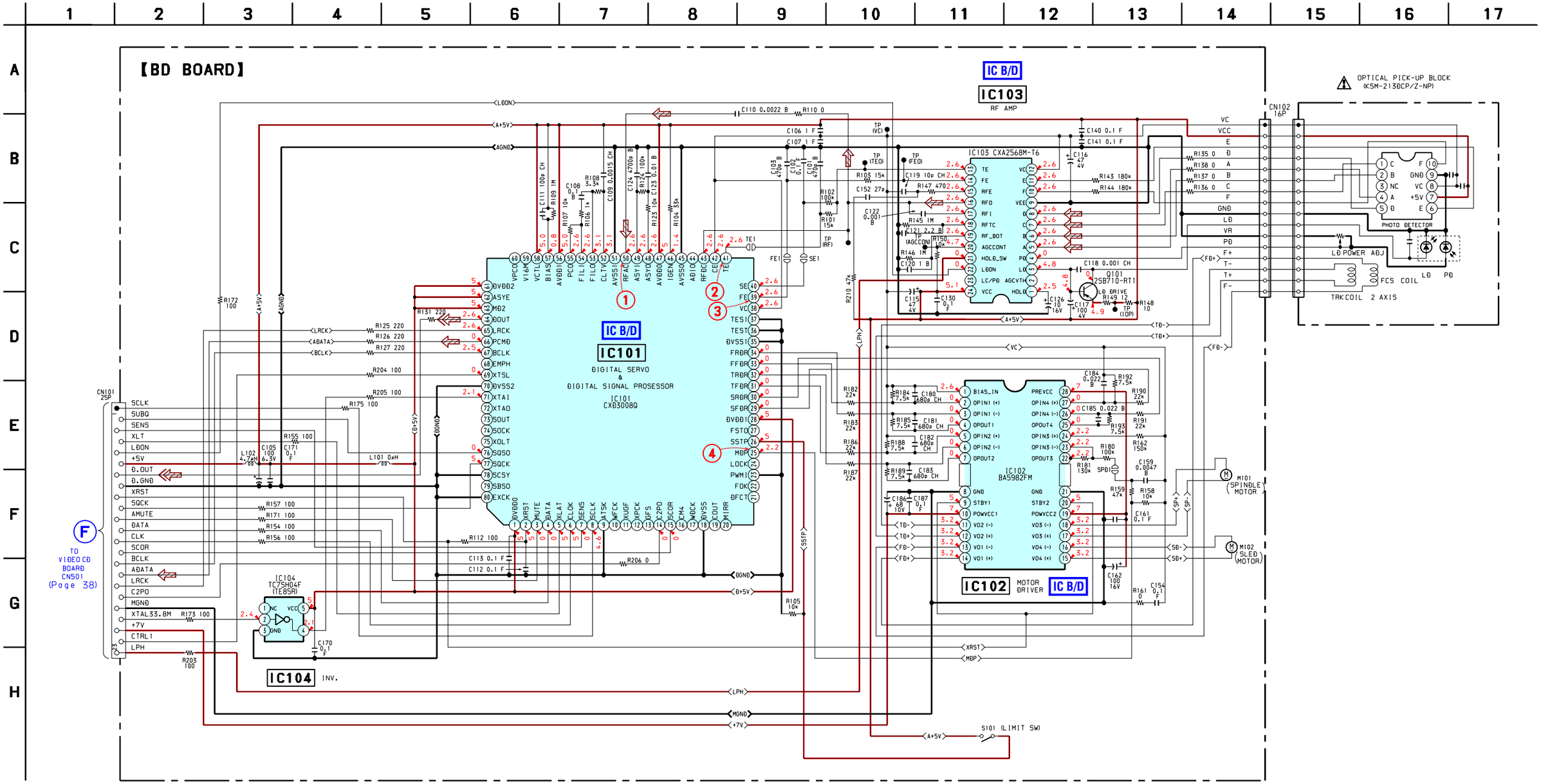
• **Semiconductor Location**

Ref. No.	Location
IC101	C-6
IC102	B-5
IC103	C-5
IC104	D-2
Q101	D-3



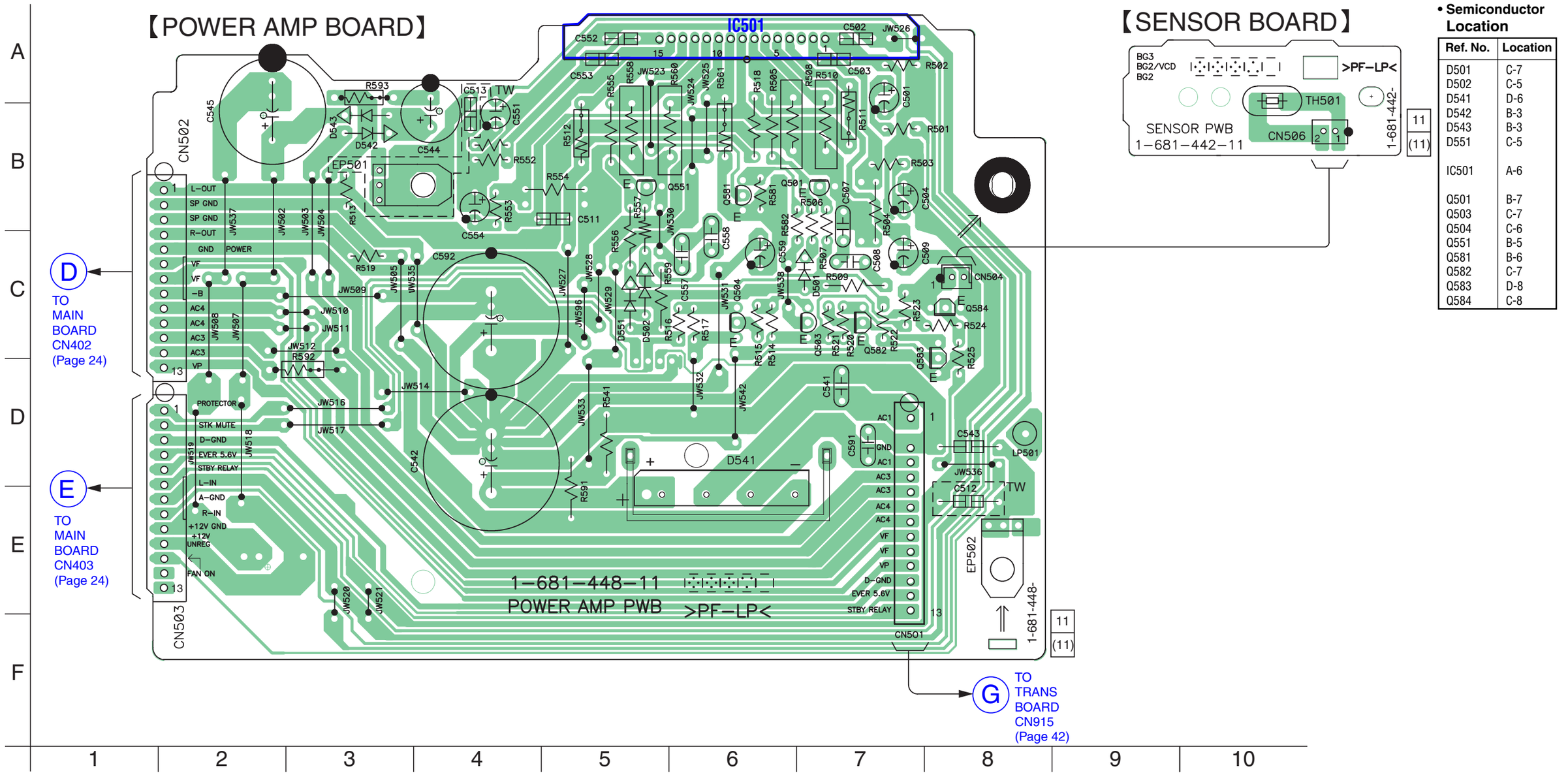
6-9. SCHEMATIC DIAGRAM BD BOARD

• See page 20 for Waveforms. • See page 49, 50 for IC Block Diagrams.



6-10. PRINTED WIRING BOARD POWER AMP SECTION

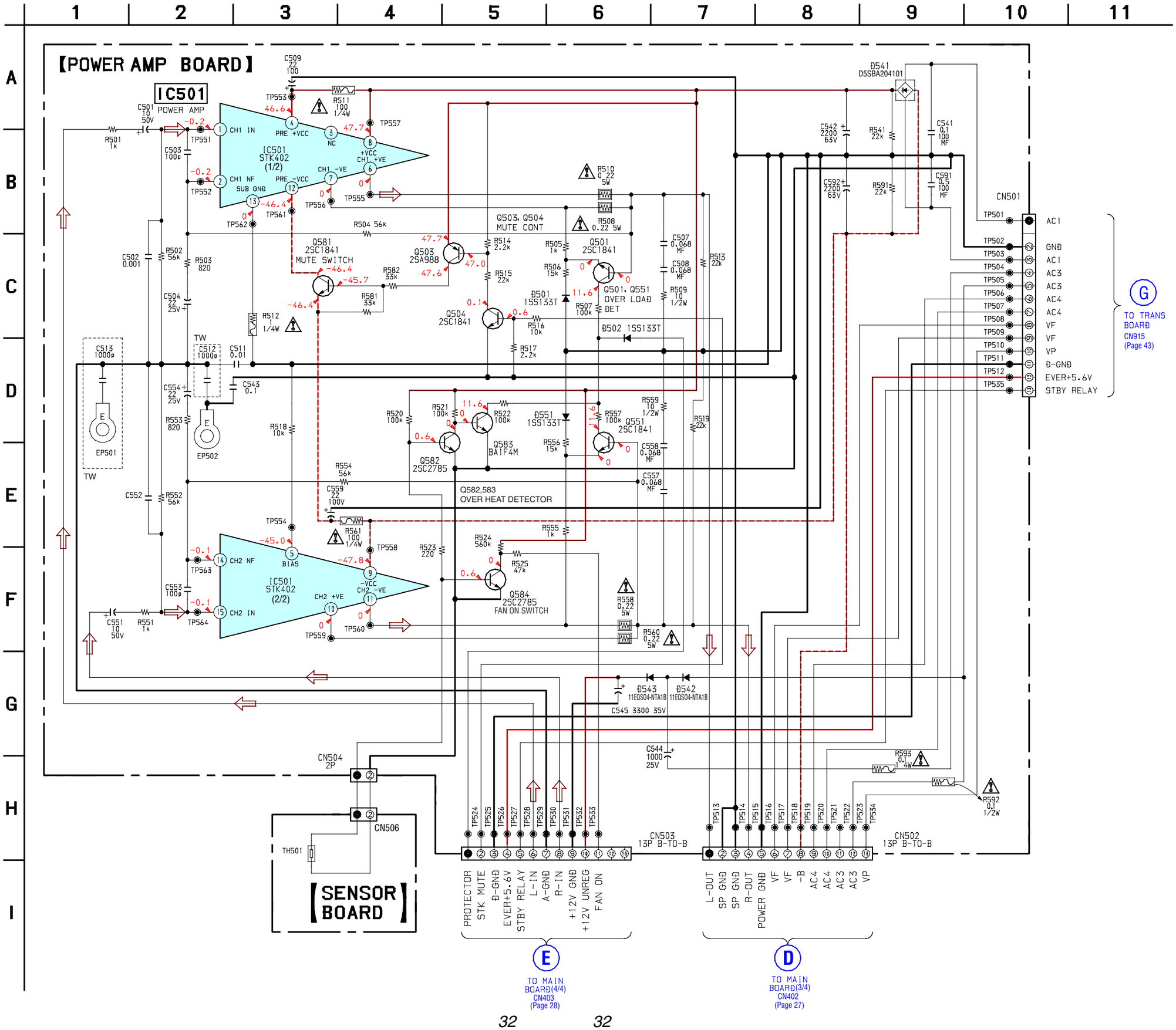
• See page 19 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D501	C-7
D502	C-5
D541	D-6
D542	B-3
D543	B-3
D551	C-5
IC501	A-6
Q501	B-7
Q503	C-7
Q504	C-6
Q551	B-5
Q581	B-6
Q582	C-7
Q583	D-8
Q584	C-8

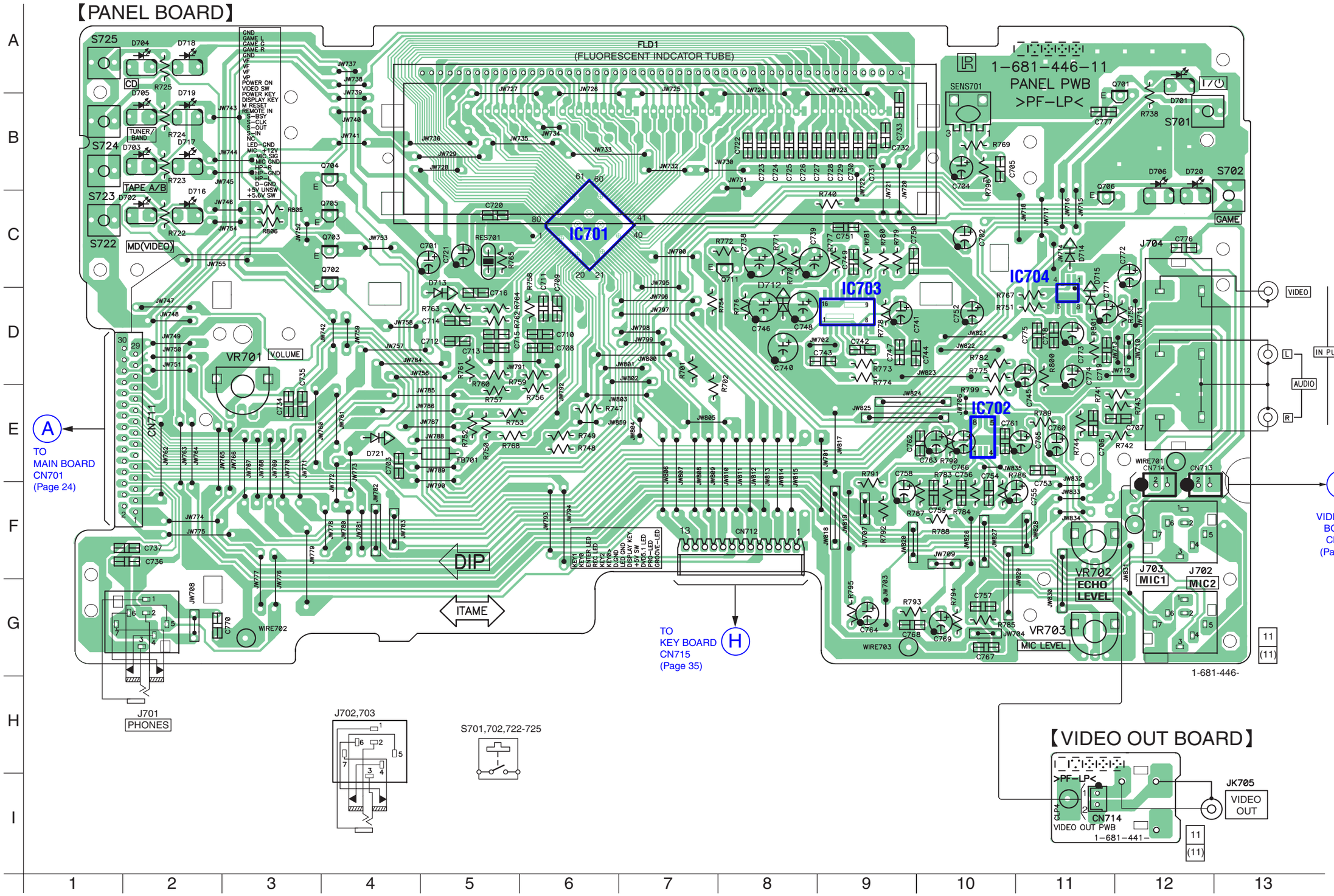
6-11. SCHEMATIC DIAGRAM POWER AMP SECTION



6-12. PRINTED WIRING BOARD PANEL SECTION

• See page 19 for Circuit Boards Location.

【PANEL BOARD】

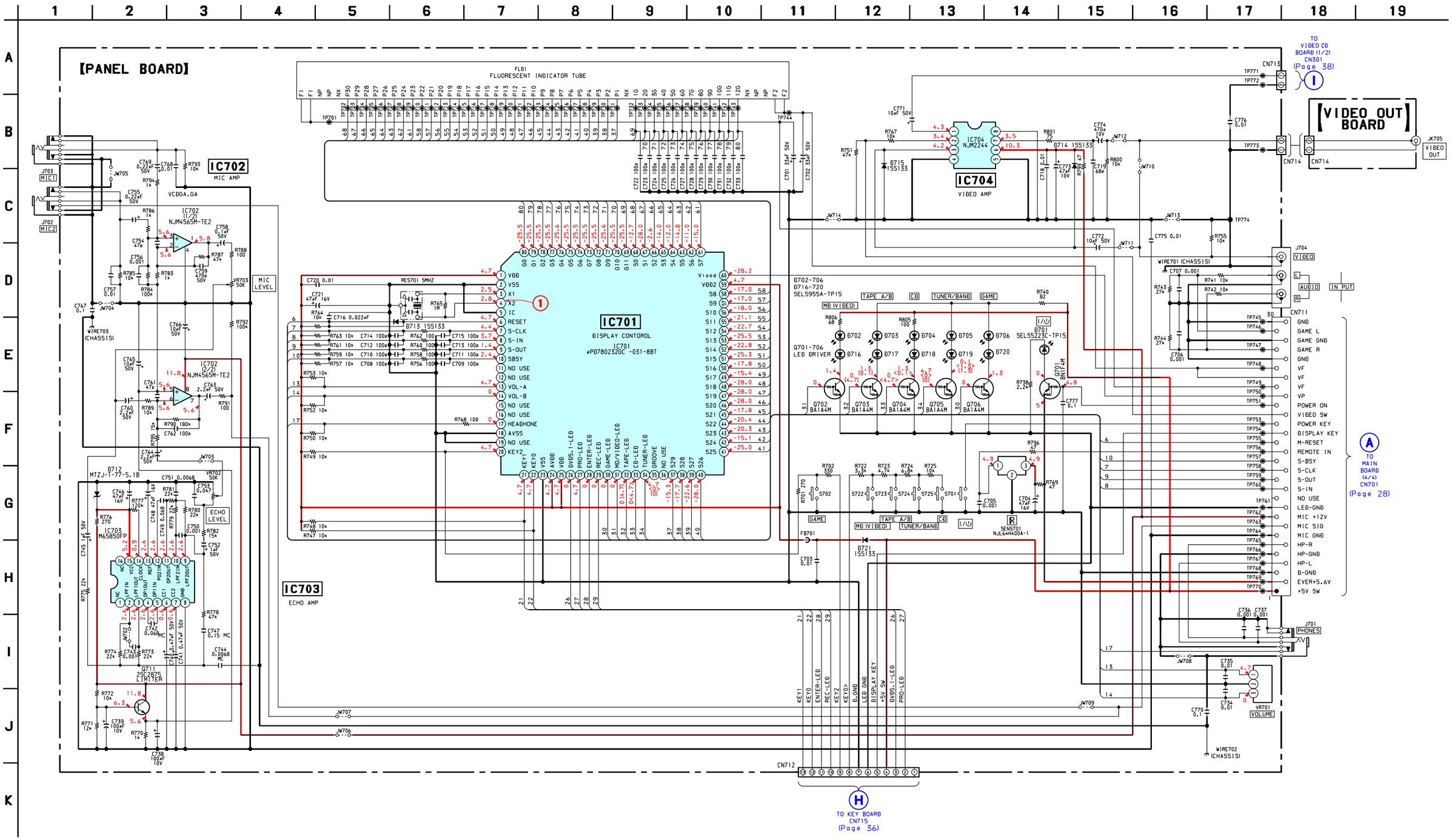


• **Semiconductor Location**

Ref. No.	Location
D701	A-12
D702	C-2
D703	B-2
D704	A-2
D705	B-2
D706	C-12
D712	D-8
D713	D-5
D714	C-11
D715	D-11
D716	C-2
D717	B-2
D718	A-2
D719	B-2
D720	C-12
D721	E-4
IC701	C-6
IC702	E-10
IC703	D-9
IC704	D-11
Q701	B-11
Q702	C-4
Q703	C-4
Q704	B-4
Q705	C-4
Q706	C-11
Q711	C-8

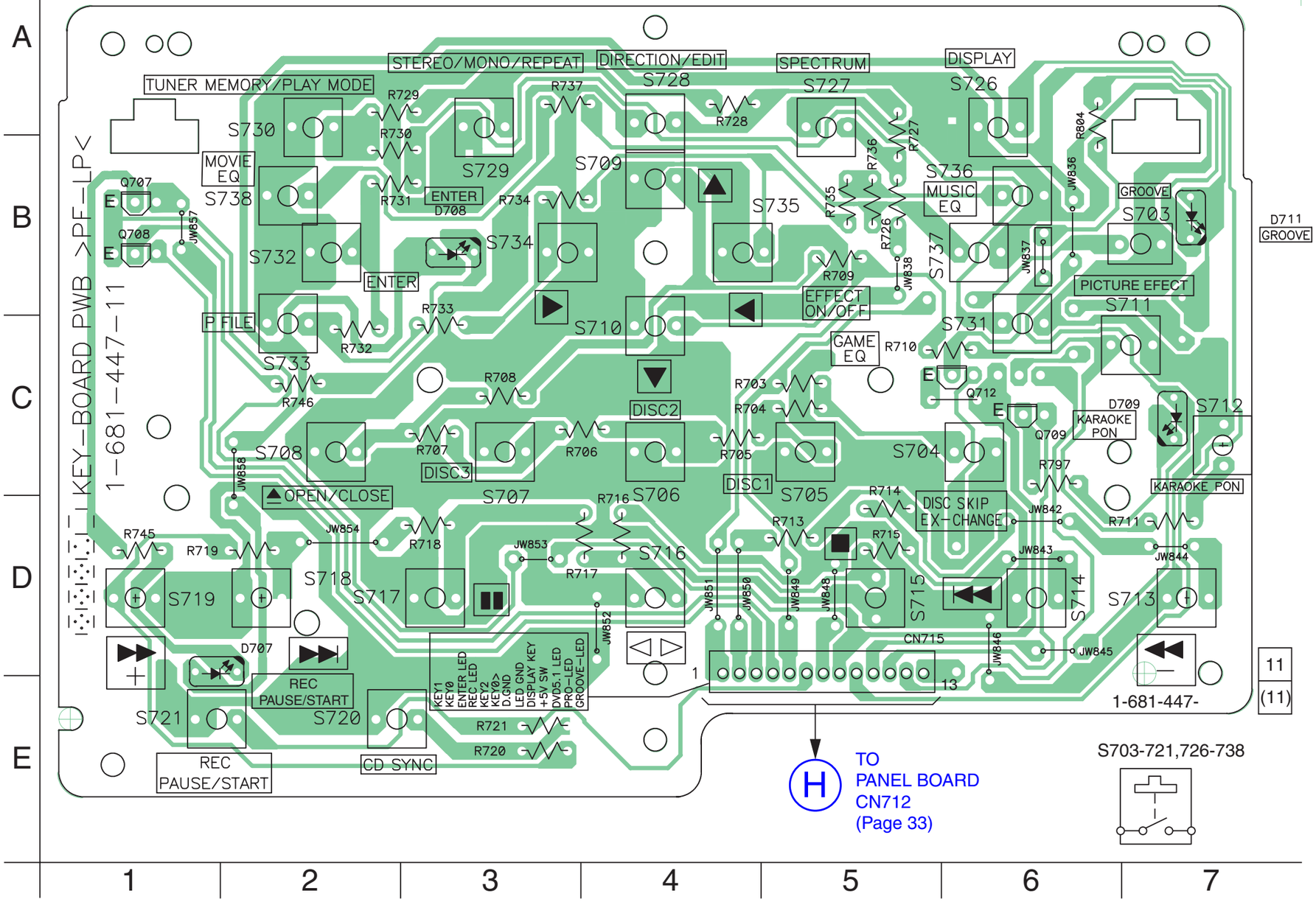
6-13. SCHEMATIC DIAGRAM PANEL SECTION

• See page 20 for Waveforms. • See page 45 for IC Pin Function Description.



6-14. PRINTED WIRING BOARD KEY BOARD • See page 19 for Circuit Boards Location.

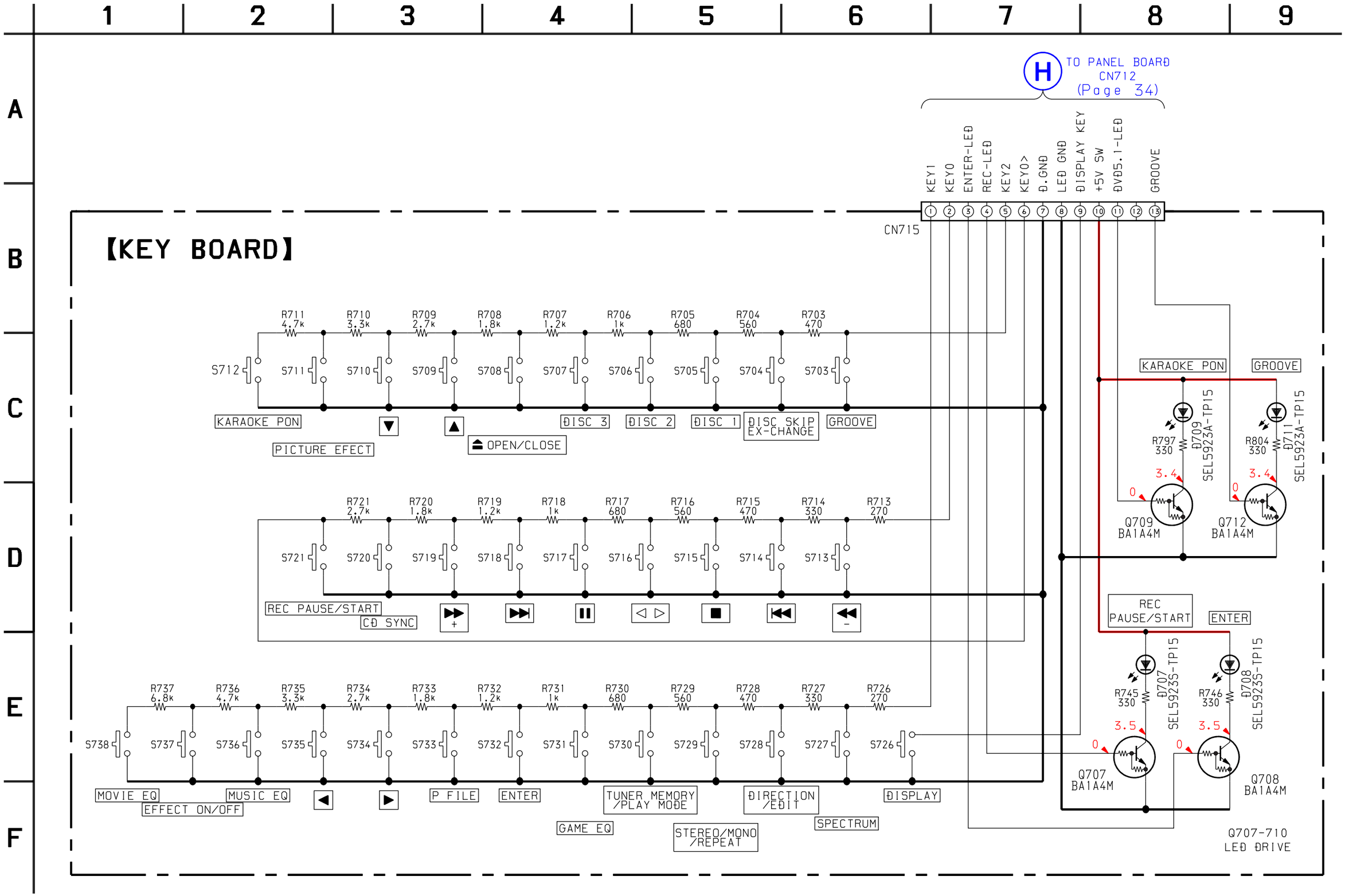
【KEY BOARD】



• **Semiconductor Location**

Ref. No.	Location
D707	D-1
D708	B-3
D709	C-7
D711	B-7
Q707	B-1
Q708	B-1
Q709	C-6
Q712	C-6

6-15. SCHEMATIC DIAGRAM KEY BOARD

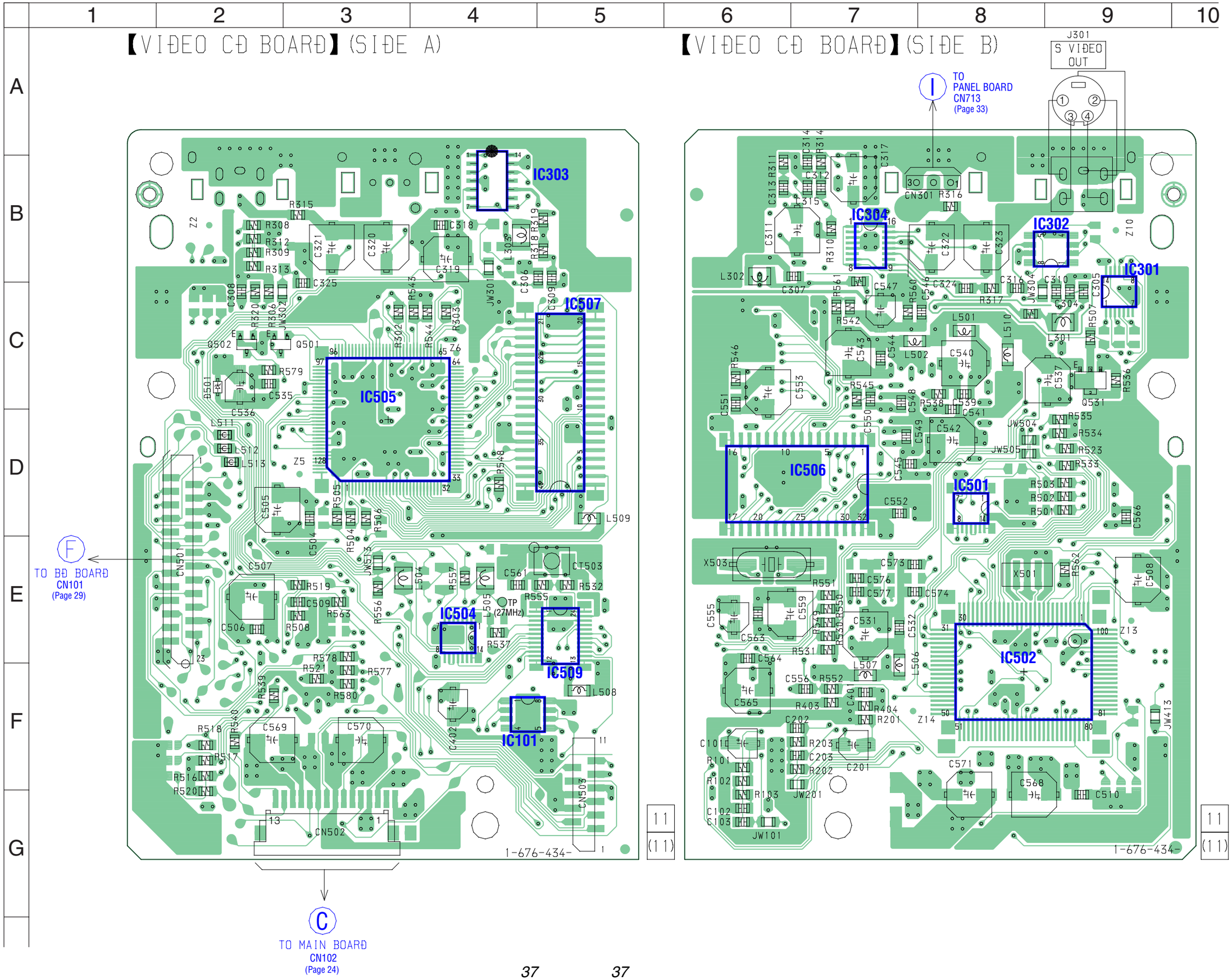


6-16. PRINTED WIRING BOARD VIDEO CD BOARD

• See page 19 for Circuit Boards Location.

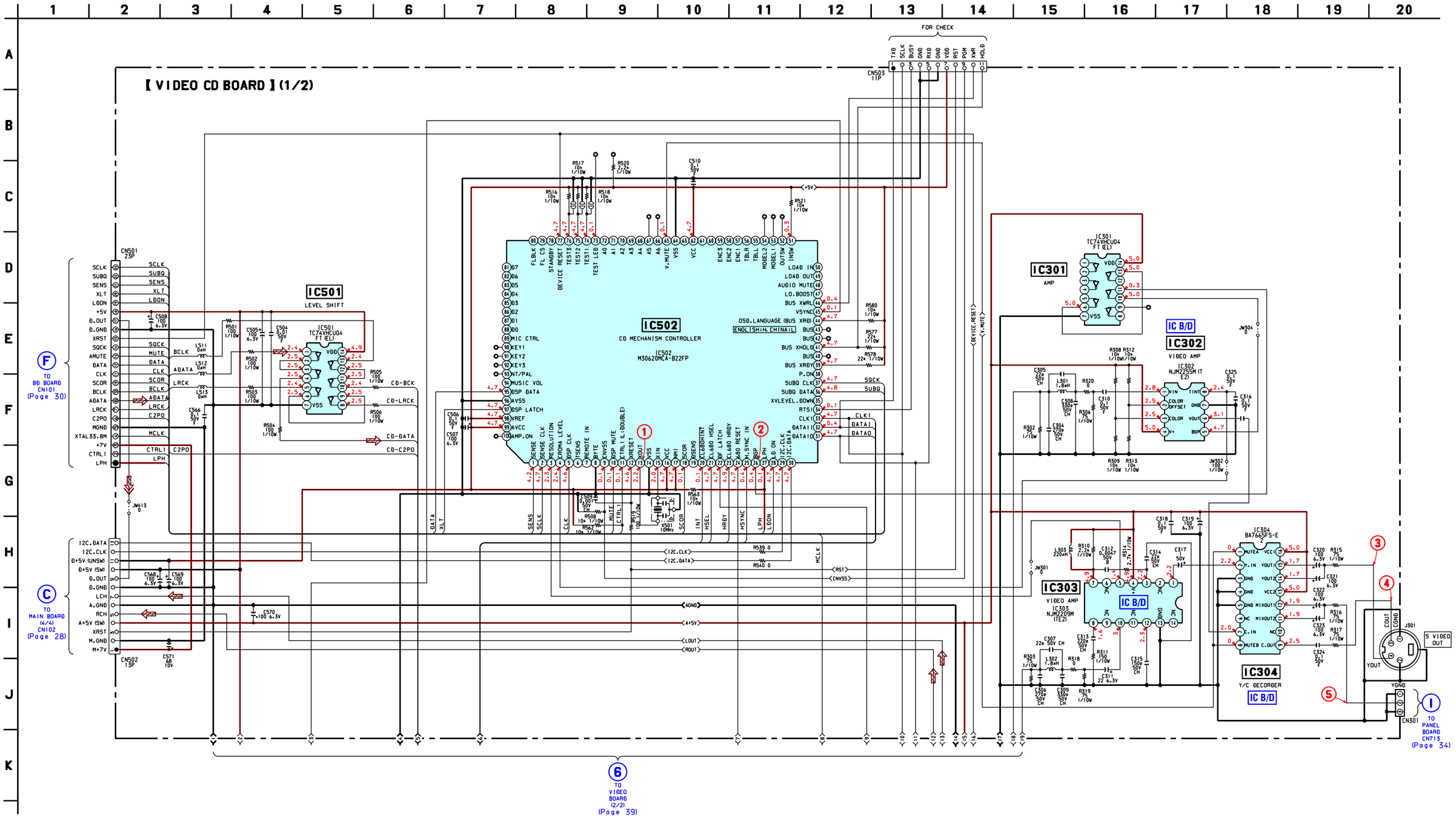
• **Semiconductor Location**

Ref. No.	Location
D501	C-2
IC101	F-4
IC301	C-9
IC302	B-9
IC303	B-4
IC304	B-7
IC501	D-8
IC502	E-9
IC504	E-4
IC505	C-3
IC506	D-7
IC507	D-5
IC509	E-5
Q501	C-3
Q502	C-2
Q531	C-9



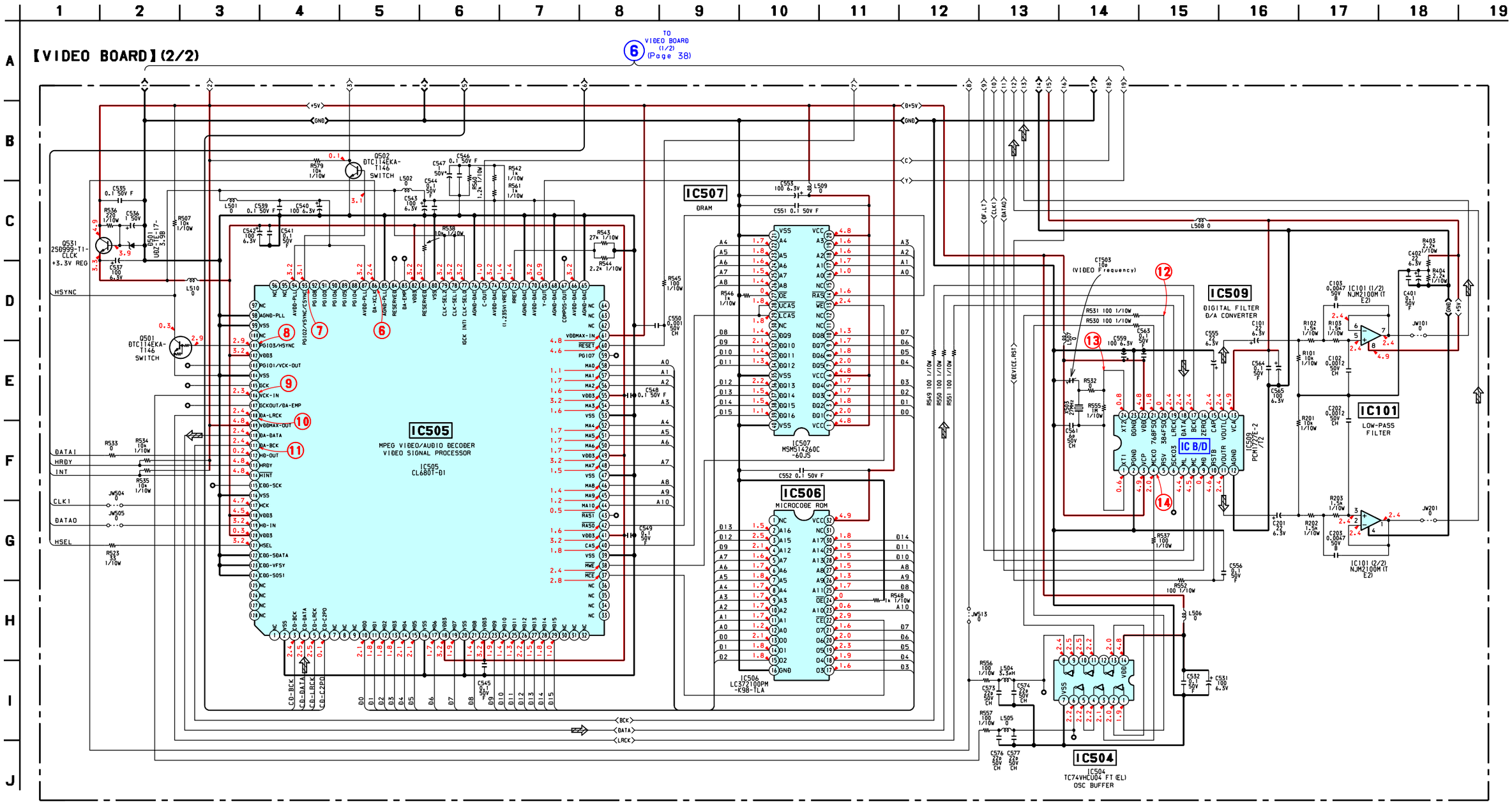
6-17. SCHEMATIC DIAGRAM VIDEO CD BOARD (1/2)

• See page 20 for Waveforms. • See page 50,51 for IC Block Diagrams.
• See page 46 for IC Pin Function Description.

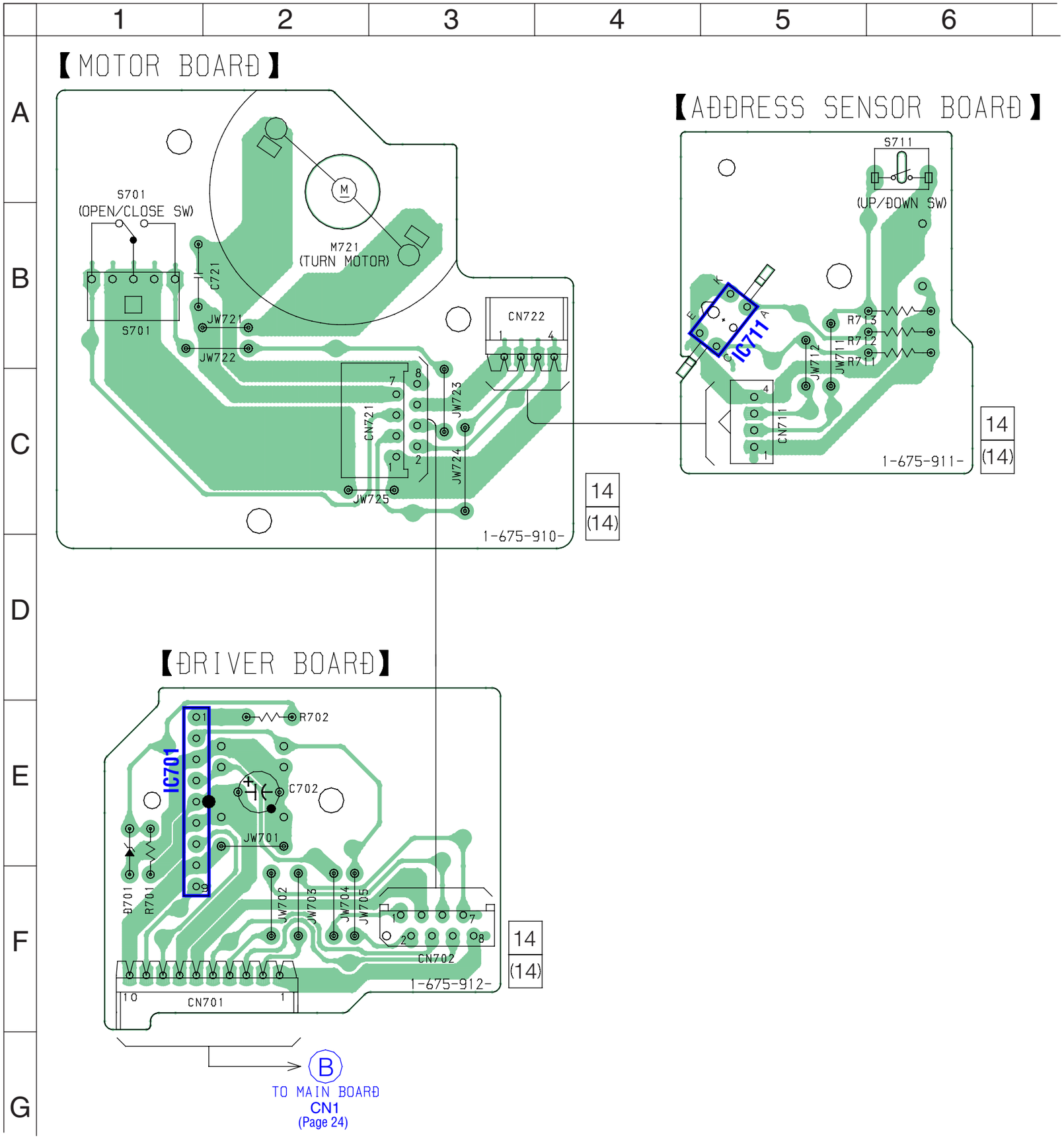


6-18. SCHEMATIC DIAGRAM VIDEO CD BOARD (2/2)

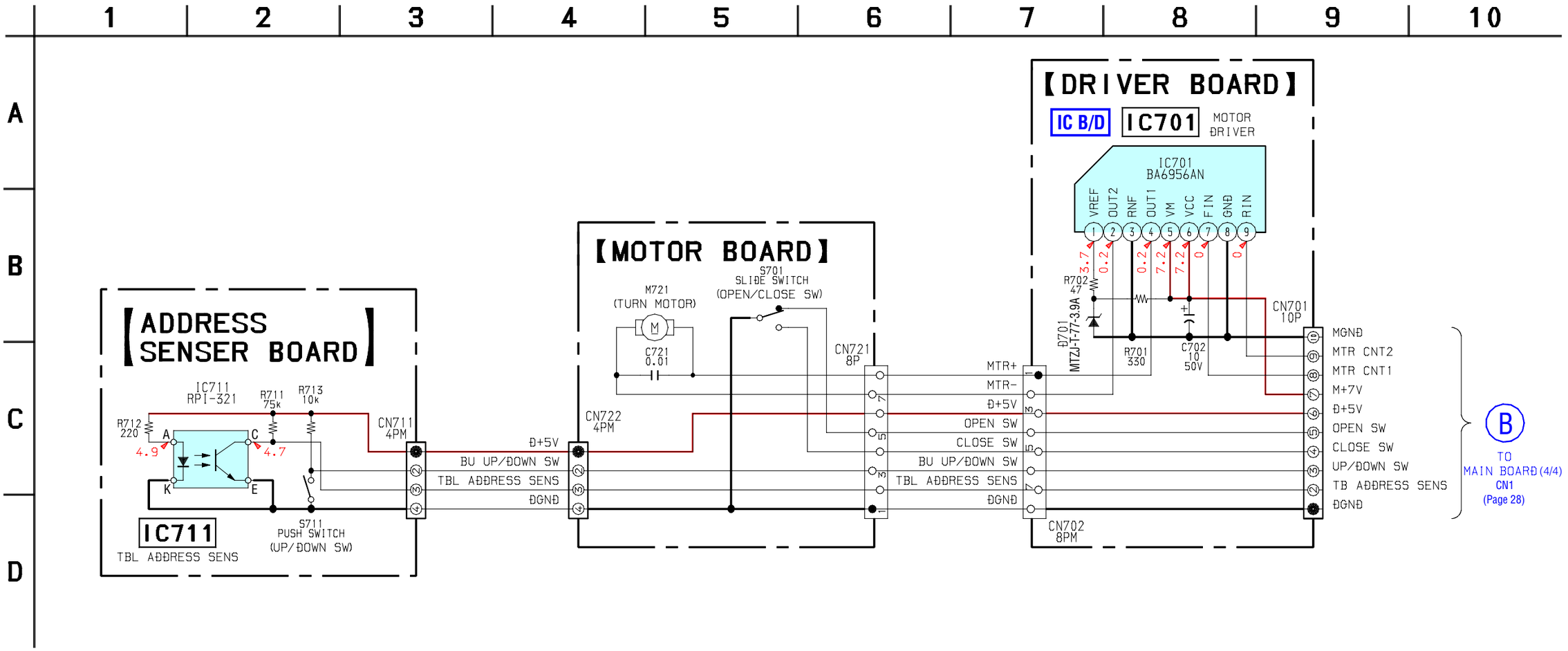
• See page 20 for Waveforms. • See page 51 for IC Block Diagrams.



6-19. PRINTED WIRING BOARD DRIVER SECTION • See page 19 for Circuit Boards Location.



6-20. SCHEMATIC DIAGRAM DRIVER SECTION • See page 49 for IC Block Diagrams.



6-21. PRINTED WIRING BOARD TRANS SECTION • See page 19 for Circuit Boards Location.

【TRANS BOARD】

1-681-444-11
TRANS PWB

T911
POWER TRANSFORMER

S901
VOLTAGE
SELECTOR

120
220
230-240

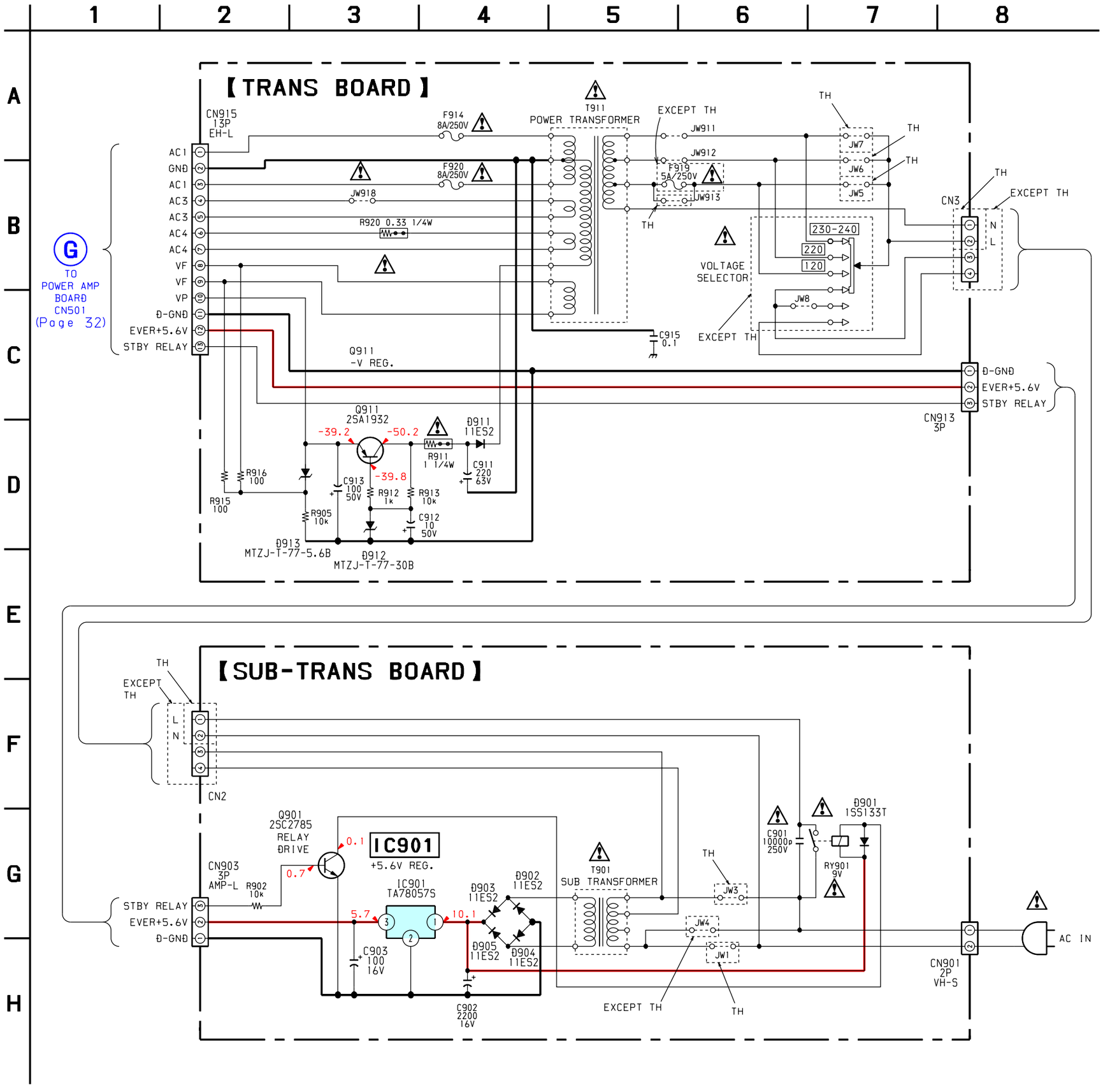
CN3
TH
L
N
EXCEPT TH
JW8
JW5
JW6
JW7
JW912
JW911
JW913
FH902 F919 FH901
JW934
PF-LP
JW931
JW932
JW920
STBY RELAY
EVER +5.6V
D-GND
CN913
FH908 F914 FH907
LP975
CN915
FH910 F920 FH909
R920
D911
C911
D912
C912
R911
R913
C915
WIRE901
JW933
R915
R916
R905
C913
D913
Q911
E
C
B
1-681-444-
11
(11)
G
TO
POWER AMP
BOARD
CN501
(Page 31)

【SUB TRANS BOARD】

1-681-445-11
SUB TRANS PWB

T901
SUB
TRANSFORMER
UP
EVER +5.6V
STBY RELAY
D-GND
IC901
CN903
C903
R902
Q901
C902
D903
D905
D902
D904
PF-LP
JW4
JW1
EXCEPT TH
CN2
TH
D901
RY901
C901
JW3
CN901
1-681-445-
11
(11)
AC
IN

6-22. SCHEMATIC DIAGRAM TRANS SECTION



6-23. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC401 M30622MAA (MASTER CONTROL)

Pin No.	Pin Name	I/O	Description
1	S-OUT	O	Serial data output to the display control.
2	S-CLK	O	Serial clock output to the display control.
3	S-BSY	I	Busy signal input from the display control. “L” : busy
4	REMOTE IN	I	Remote commander input.
5	3878-DAT	O	Data signal output for IC301(BH3878KS2)
6	3878-LAT	O	Latch signal output for IC301(BH3878KS2)
7	3878-CLK	O	Clock signal output for IC301(BH3878KS2)
8	BYTE	—	Connected to ground.
9	CN VSS	—	Connected to ground.
10	XC IN	I	SUB SYSTEM CLOCK input.(32.768MHz)
11	XC OUT	O	SUB SYSTEM CLOCK output.(32.768MHz)
12	RESET	I	System reset input.
13	X OUT	O	MAIN SYSTEM CLOCK output.(16MHz)
14	VSS	—	Connected to ground.
15	X IN	I	MAIN SYSTEM CLOCK input.(16MHz)
16	VCC	—	Power supply.(+5V)
17	NMI	I	PULL UP.(EVER+5V)
18	AC-CUT	I	AC CUT ON(L)/OF(H) CHECK.
19	RCOR	I	CD Q-data request signal input.
20	RDS-INT	I	RDS interrupt signal input.
21	RDS-DATA	I	RDS data signal input.
22	ST-MUTE	O	Tuner mute signal output.
23	STEREO(IN)	I	STEREO detect signal input.L=ON,H=OFF
24	TUNER	I	TUNER detect signal input.L=ON,H=OFF
25	ST-CE	O	TUNER chip eneble output.
26	ST-DOUT	O	TUNER data output.
27	ST-DIN	I	TUNER data input.
28	ST-CLK	O	TUNER clock signal output.
29	VCD	—	Not used.
30	VCD	—	Not used.
31	NO USE	—	Not used.
32	SQ-DAT IN	I	Subcode Q data input(CD data).
33	SQ-CLK	I	Subcode Q data input(CD clock).
34	SENS	I	BD condition signal input.
35	CD-DAT OUT	O	CD data output.
36	CAN’T-USE	—	Not used.
37	CD-CLK	O	CD clock output.
38	CD-POWER	O	CD-POWER ON/OFF signal output.H=ON,L=OFF
39	CLOCK-OUT	—	Not used.
40	HOLD	O	MODE signal input.
41	M-RESET	O	Micom reset signal output to the display control. “L” : reset
42	XLT	O	CD latch signal output.
43	XRST	O	CD reset signal output.
44	LOAD-IN	I	Loading motor control signal input.
45	LOAD-OUT	O	Loading motor control signal output.
46	OPEN	I	Tray open detect signal input.
47	CLOSE	I	Tray close detact signal input.
48	UP/DOWN	I	Pick-up up/down detect signal input.
49	T-SENS	I	CD table detect signal input.
50	GAME/DVD	—	Not used.

Pin No.	Pin Name	I/O	Description
51	NO USE	—	Not used.
52	CENT-MUTE	—	Not used.
53	REAR-MUT	—	Not used.
54	494-DAT	—	Not used.
55	494-CLK	—	Not used.
56	494-LT	—	Not used.
57	SUR1	—	Not used.
58	SUR2	—	Not used.
59	SUR3	—	Not used.
60	A-TRG	O	A deck trigger control signal output.H=ON,L=OFF
61	B-TRG	O	B deck trigger control signal output.H=ON,L=OFF
62	VDD	—	Power supply.(+5V)
63	SOFT TEST	—	Not used.
64	VSS	—	Connected to ground.
65	CAMP-CONT	O	Capstan motor REV/FWD/STOP control signal output.H=REV,L=FWD/STOP
66	B-REC FWD	I	Detection input from the deck-B rec forward detect switch. “L” : rec
67	B-REC REW	I	Detection input from the deck-B rec reverse detect switch. “L” : rec
68	A-HAFE	I	A deck hafe detect signal input.
69	B-HAFE	I	B deck hafe detect signal input.
70	A-PLAY	I	A deck play detect signal input.
71	B-PLAY	I	B deck play detect signal input.
72	AMS-IN	I	AMS signal input.L=ON,H=OFF
73	DISPLAY KEY	O	DISPLAY KEY control signal output.
74	POWER-KEY	O	POWER KEY control signal output.
75	BIAS	O	BIAS ON/OFF signal output.H=ON,L=OFF
76	PB-A/B	O	Playback deck A/B select signal output.H=High,L=Normal
77	TC-RELAY	O	Tape deck relay ON/OFF signal output.H=ON,L=OFF
78	PB-MUT	O	PB mute ON/OFF signal output .H=ON,L=OFF
79	REC-MUT	O	REC mute ON/OFF signal output .H=ON,L=OFF
80	SP-LATA	O	Serial data latch pulse output to BH3878KS2 (IC301)
81	SP-LATB	O	Serial data latch pulse output to BH3878KS2 (IC301)
82	SP-LATC	O	Serial data latch pulse output to BH3878KS2 (IC301)
83	LINE-MUT	O	Line mute signsl output.L=ON,H=OFF
84	STK-MUT	O	Power amplifier mute ON/OFF signal output.H=ON,L=OFF
85	PROTECT	I	Speaker protect signal input.L=ON,H=OFF
86	STB-RELAY	O	STANDBY relay control signal output.
87	REAR-RELAY	O	Rear speaker relay control output.
88	FRONT-RELAY	O	Front speaker relay control output.
89	A-SHUT	O	A deck reel pulse detect signal output.
90	B-SHUT	O	B deck reel pulse detect signal output.
91	SP/VACS	I	Band pass filter signal input from the sound processor. (IC301)
92	MODE IN	I	MODEL
93	SPEC-IN	I	Version select signal input.
94	VIDEO SW2	O	Video switch control signal output to the video switch. (IC704)
95	VACS	I	Signal level input for the variable attenuation control system.
96	AVSS	—	Connected to ground.
97	POWER	O	POWER ON/OFF signal output.H=ON,L=OFF
98	AV-REF	—	Analog reference voltage.
99	AVCC	—	Power supply.(+5V)
100	S-IN	I	Serial data intput from the display control.

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• PANEL BOARD IC701 μPD780232GC-031-8BT (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Description
1	VDD	—	Power supply.(+5V)
2	VSS	—	Connected to ground.
3	X1	O	System clock output terminal.(5MHz)
4	X2	I	System clock input terminal.(5MHz)
5	IC	—	Connected to ground.
6	RESET	I	Reset signal input from the main controller.
7	S-CLK	I	Serial clock input from the main controller.
8	S-IN	I	Serial data input from the main controller.
9	S-OUT	O	Serial data output to the main controller.
10	SBSY	O	Serial interface busy signal output.
11	NO USE	—	Not used.
12	NO USE	—	Not used.
13	VOL-A	I	VOLUME A signal input.
14	VOL-B	I	VOLUME B signal input.
15	NO USE	—	Not used.
16	NO USE	—	Not used.
17	HEADHONE	I	Headphone detect signal input. H=ON,L=OFF
18	AVSS	—	Connected to ground.
19	NO USE	—	Not used.
20 to 22	KEY2-KEY0	I	KEY input.(AD)
23	VSS	—	Connected to ground.
24	AVDD	—	Power supply.(+5V)
25	VDD	—	Power supply.(+5V)
26	DV5.1-LED	O	DV5.1 LED driver output.
27	PRO-LED	O	GROOVE LED driver output.
28	ENTER-LED	O	ENTER LED driver output.
29	REC-LED	O	REC LED driver output.
30	GAME-LED	O	GAME LED driver output.
31	MO/VIDEO-LED	O	MO(VIDEO) LED driver output.
32	TAPE-LED	O	TAPE LED driver output.
33	CD-LED	O	CD LED drover output.
34	TUNER-LED	O	TUNER LED driver output.
35	GROOVE	—	Not used.
36	NO USE	—	Not used.
37 to 58	S29-S8	O	FL segment signal output.
59	VDD2	—	Power supply.(+5V)
60	VLOAD	—	Negative power supply.
61 to 68	S7-S0	O	FL segment signal output.
69 to 80	G11-G0	O	FL gride output.

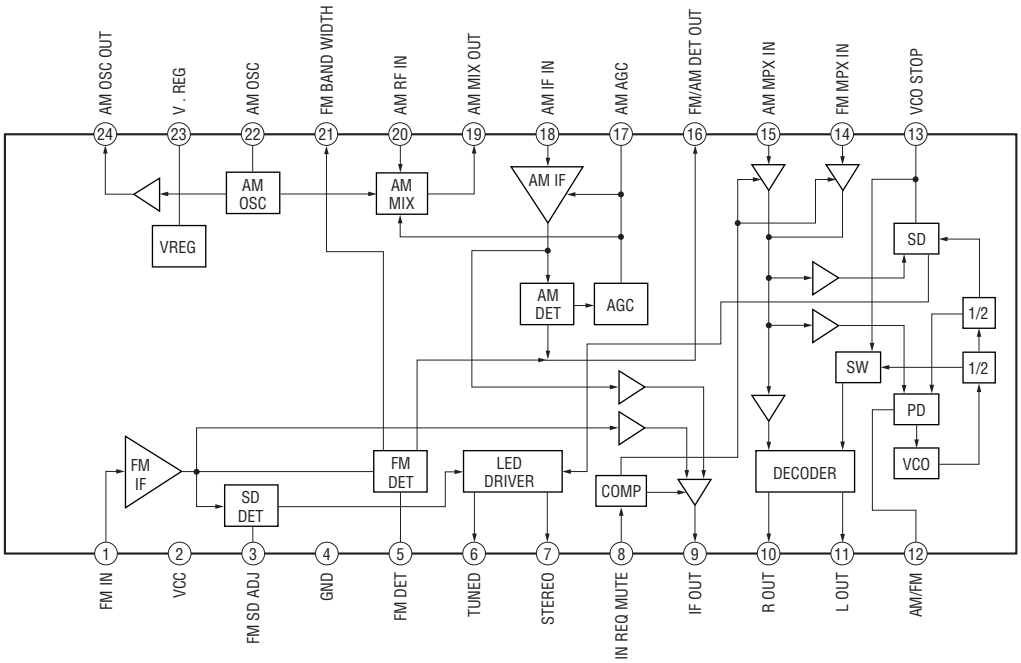
• VIDEO CD BOARD IC502 M30620MCA-B22FP (CD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	SENSE	I	Internal status (SENSE) signal input from the CXD3008Q (IC101)
2	SENSE CLK	O	Sense serial data reading clock signal output to the CXD3008Q (IC101)
3	RESOLUTION	O	Y resolution output
4	CROMA LEVEL	O	Chroma level output
5	DSP CLK	O	Serial data transfer clock signal output to the CXD3008Q (IC101)
6	TSENS	O	Not used (open)
7	REMOTE IN	I	Remote control signal input terminal Not used (open)
8	BYTE	I	External data bus line byte selection signal input "L": 16 bit, "H": 8 bit (fixed at "L")
9	CN VSS	—	Ground terminal
10	DSP MUTE	O	Muting on/off control signal output to the CXD3008Q (IC101) "H": muting on
11	CTRL1	O	Clock selection signal output to the CXD3008Q (IC101) "L": 16.9344 MHz (double speed), "H": 33.8688 MHz
12	XRESET	I	Reset signal input from the system controller (IC501) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
13	XOUT	O	Main system clock output terminal (10 MHz)
14	VSS	—	Ground terminal
15	XIN	I	Main system clock input terminal (10 MHz)
16	VCC	—	Power supply terminal (+5V)
17	NMI	I	Non-maskable interrupt input terminal (fixed at "H" in this set)
18	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD3008Q (IC101)
19	DSENS	O	Not used (open)
20	$\overline{\text{CL680 HINT}}$	I	Interrupt request signal input from the MPEG video/audio decoder (IC505)
21	CL680 HSEL	O	HSEL serial signal output to the MPEG video/audio decoder (IC505)
22	DF LATCH	O	Serial data latch pulse output to the D/A converter (IC509) "L" active
23	CL680 HRDY	I	HRDY serial signal input from the MPEG video/audio decoder (IC505)
24	680 RESET	O	Reset signal output to the MPEG video/audio decoder (IC505) "L": reset
25	H.SYNC IN	I	Horizontal sync signal input
26	BGP	O	Burst gate pulse signal output
27	LPH	O	AGC hold signal output
28	LD ON	O	Laser power selection signal output to the CXA2568M (IC103) "H": laser on
29	I2C.CLK	I/O	I^2C clock signal from CD mechanism control (IC501).
30	I2C.DATA	I/O	I^2C data signal from CD mechanism control (IC501).
31	DATA1O	O	Serial data output to the MPEG video/audio decoder (IC506) and D/A converter (IC509)
32	DATA1I	I	Serial data input from the MPEG video/audio decoder (IC506)
33	CLK1	O	Serial data transfer clock signal output to the MPEG video/audio decoder (IC506) and D/A converter (IC509)
34	RTS1	O	RTS signal to serial port (check connector).
35	XVLEVEL.DOWN	O	Not used (open)
36	SUBQ DATA	I	Sub-code Q data input from the CXD3008Q (IC101)
37	SUBQ CLK	O	Sub-code Q data reading clock signal output to the CXD3008Q (IC101)
38	P.ON	O	Power on/off control signal output terminal Not used (open)
39	BUS XRDY	I	Ready signal input terminal Not used (fixed at "H")
40	BUS	O	Not used (open)
41	BUS XHOLD	I	Hold signal input terminal Not used (fixed at "H")
42, 43	BUS	O	Not used (open)
44	OSD.LANGUAGE	I	OSD language select input terminal "H": English, "L": China
45	VSYNC	I	Vertical sync signal input
46	BUS XWRL	O	Bus write signal output.
47	LO.BOOST	O	Not used (open)
48	AUDIO MUTE	O	Audio muting on/off control signal output terminal "L": muting on Not used (open)
49	LOAD OUT	O	Loading motor drive signal output terminal Not used (open)
50	LOAD IN	O	Loading motor drive signal output terminal Not used (open)
51	INSW	I	Disc detection (load in) switch input terminal Not used (fixed at "H")

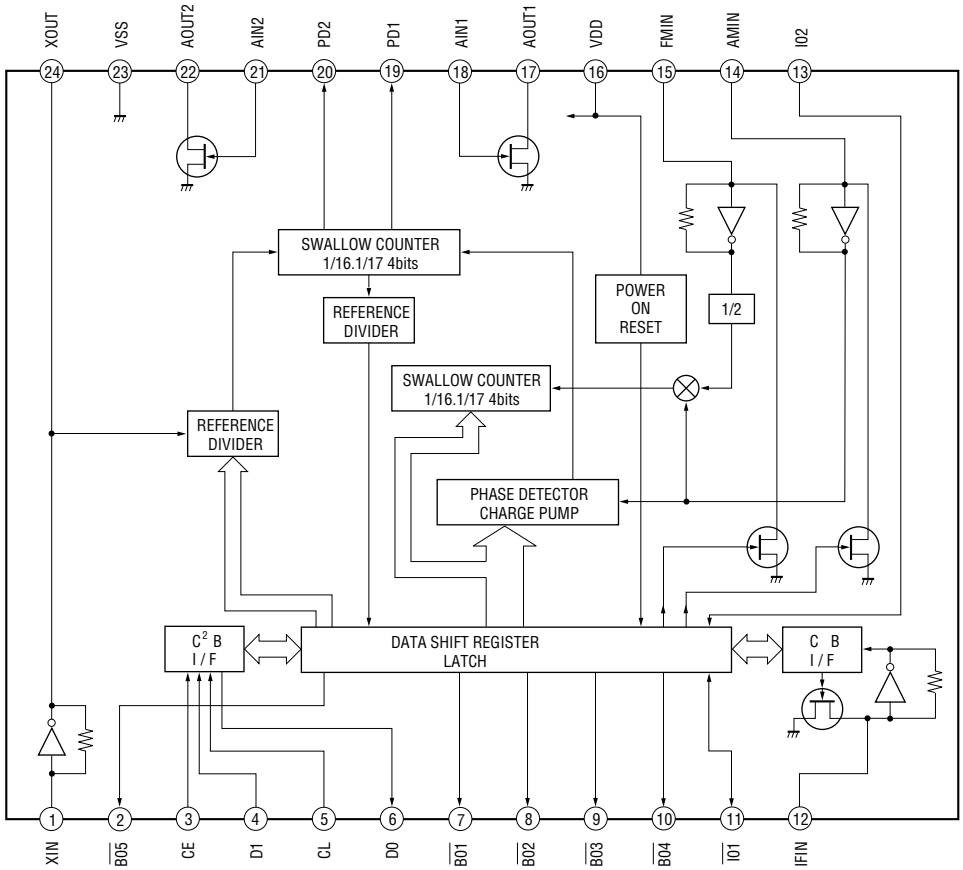
Pin No.	Pin Name	I/O	Description
52	OUTSW	I	Disc detection (load out) switch input terminal Not used (fixed at “H”)
53	MODEL1	I	Destination setting terminal (fixed at “L”)
54	MODEL2	I	Destination setting terminal (fixed at “L”)
55	TBLL	—	Not used (open)
56	TBLR	—	Not used (open)
57 to 59	ENC1 to ENC3	—	Not used (open)
60, 61		—	Not used (open)
62	VCC	—	Power supply terminal (+5V)
63		—	Not used (open)
64	VSS	—	Ground terminal
65	V.MUTE	O	Video muting on/off control signal output
66 to 72	A6 to A0	O	Address signal output for the external device
73	TEST LED	O	LED drive signal output for the self diagnosis indicator (D502) Normally: “L” (LED on)
74	TEST1	I	Setting terminal for the test mode 1 (for VCD check) Normally: fixed at “H” (“L”: test mode)
75	TEST2	I	Setting terminal for the test mode 2 (for SERVO check) Normally: fixed at “H” (“L”: test mode)
76	TEST3	I	Setting terminal for the test mode 3 Normally: fixed at “H” (“L”: test mode) Not used (fixed at “H”)
77	DEVICE RESET	O	System reset signal output to the CXD3008Q (IC101), BA5974FP (IC102) and D/A converter (IC509) “L”: reset
78	STANDBY	O	Standby on/off control signal output terminal Not used (open)
79	FL CS	O	Chip select signal output terminal Not used (open)
80	FLBLK	O	Blank control signal output terminal Not used (open)
81 to 88	D7 to D0	I/O	Two-way data bus with the external device Not used (open)
89	MIC CTRL	—	Not used.
90 to 92	KEY1 to KEY3	I	Key input terminal Not used (fixed at “H”)
93	NT/PAL	I	Video system select input terminal (open: AUTO)
94	MUSIC VOL	—	Not used.
95	DSP DATA	O	Serial data output to the CXD3008Q (IC101)
96	AVSS	—	Ground terminal (for A/D conversion)
97	DSP LATCH	O	Serial data latch pulse output to the CXD3008Q (IC101)
98	VREF	I	Reference voltage (+5V) input terminal (for A/D conversion)
99	AVCC	—	Power supply terminal (+5V) (for A/D conversion)
100	AMP ON	—	Not used.

6-24. IC BLOCK DIAGRAMS

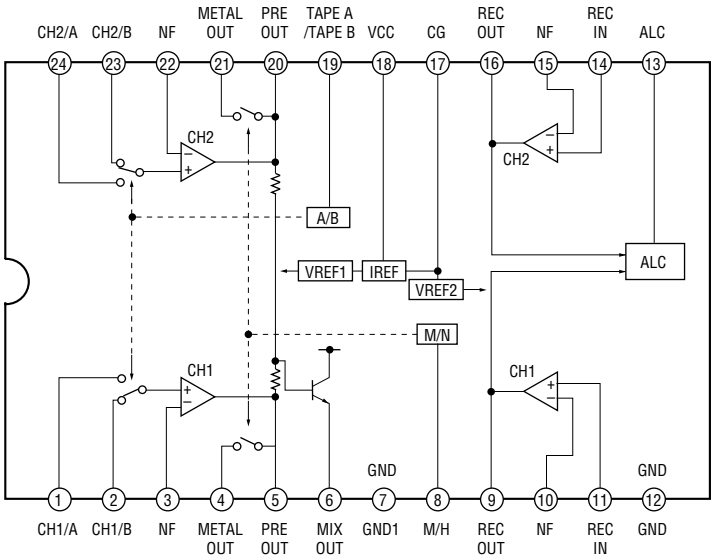
IC101 BA1450 (MAIN BOARD)



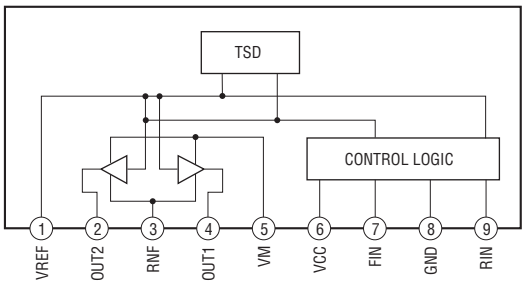
IC102 LC72130 (MAIN BOARD)



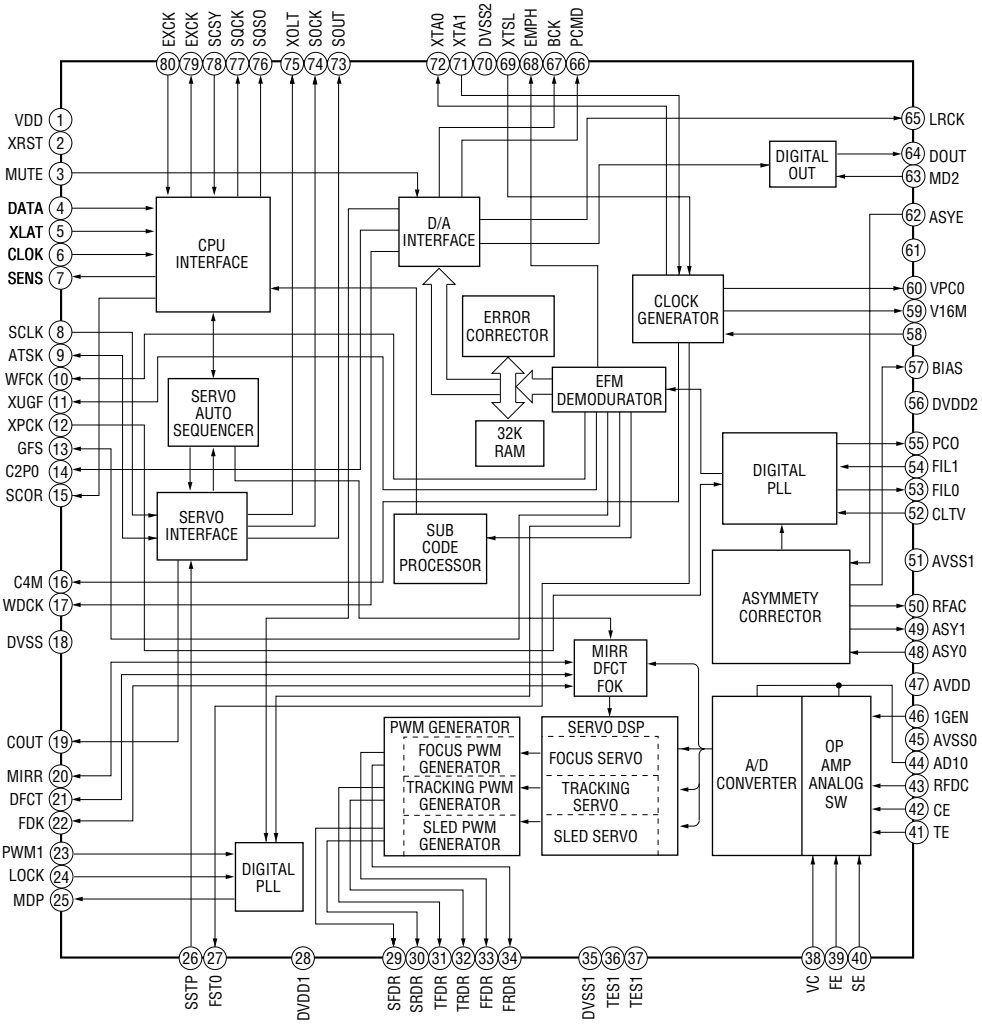
IC201 TA8189N (MAIN BOARD)



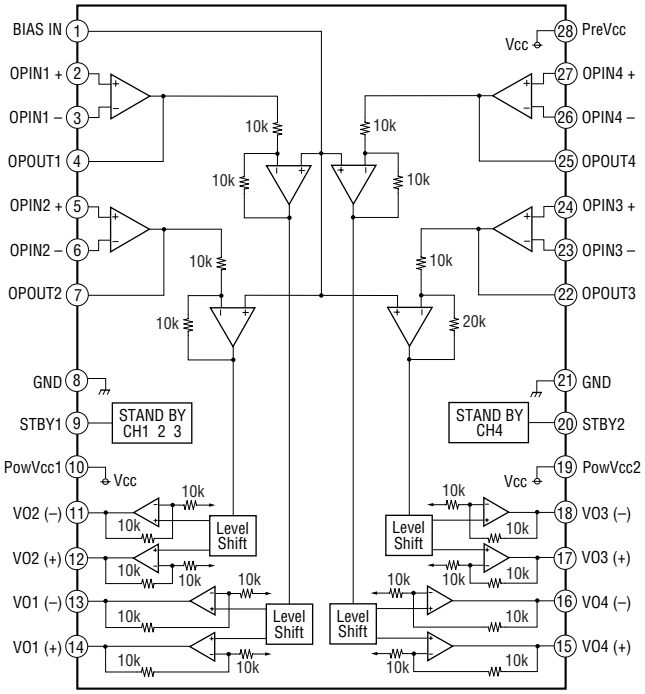
IC701 BA6956AN (DRIVER BOARD)



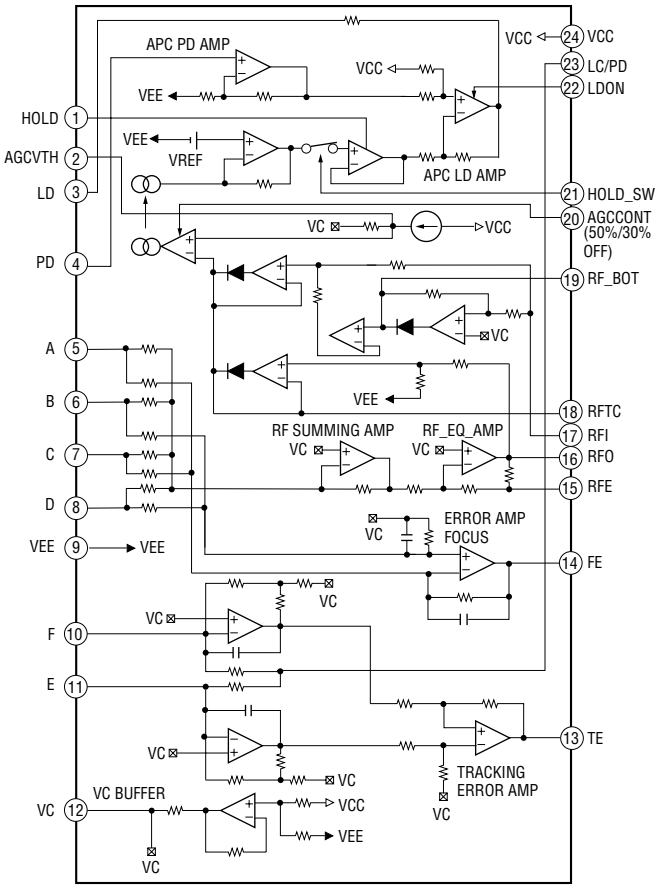
IC101 CXD3008Q (BD BOARD)



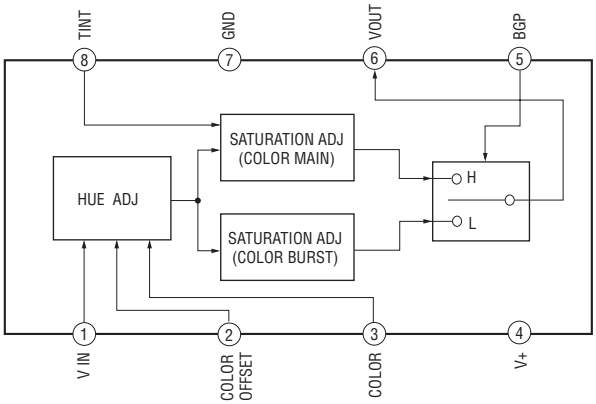
IC102 BA5982FM (BD BOARD)



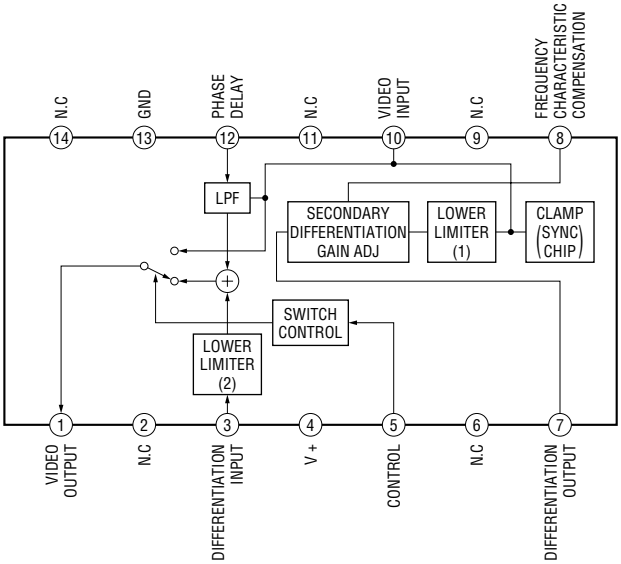
IC103 CXA2568M-T6 (BD BOARD)



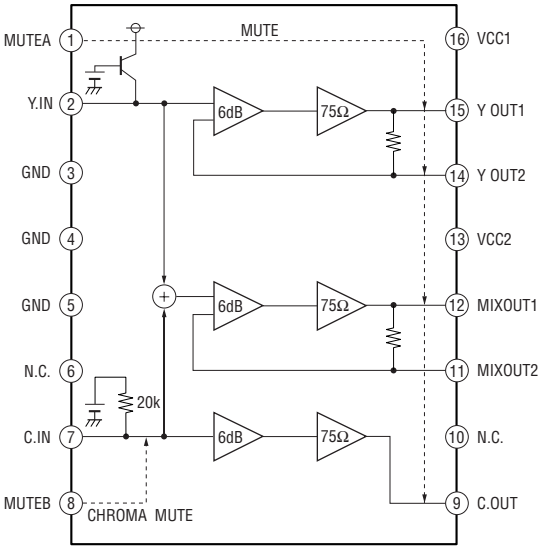
IC302 NJM2255M (VIDEO CD BOARD)



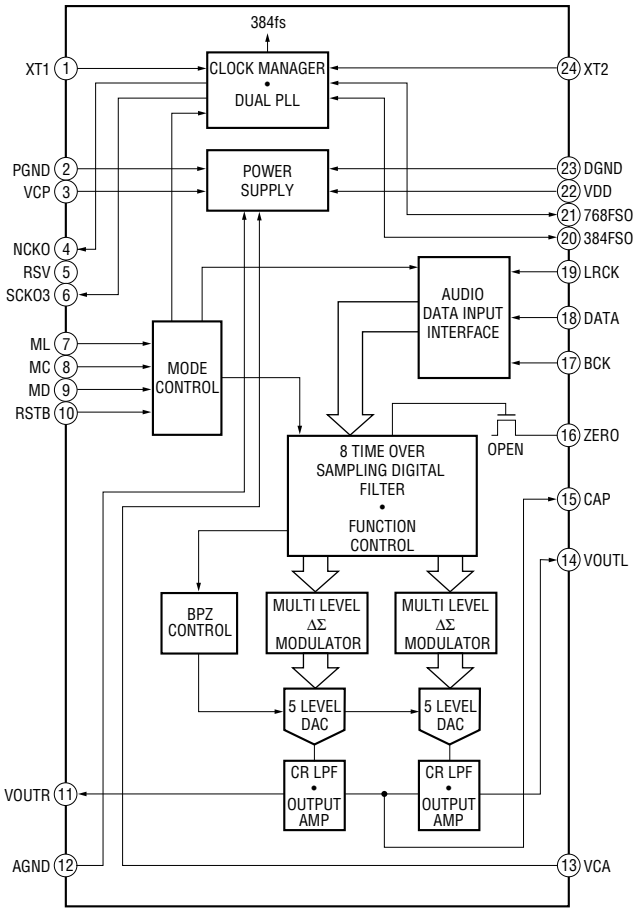
IC303 NJM2209M (TE2) (VIDEO CD BOARD)



IC304 BA7665FS-E2 (VIDEO CD BOARD)



IC509 PCM1727 E-2/T2 (VIDEO CD BOARD)



SECTION 7
EXPLODED VIEWS

NOTE:

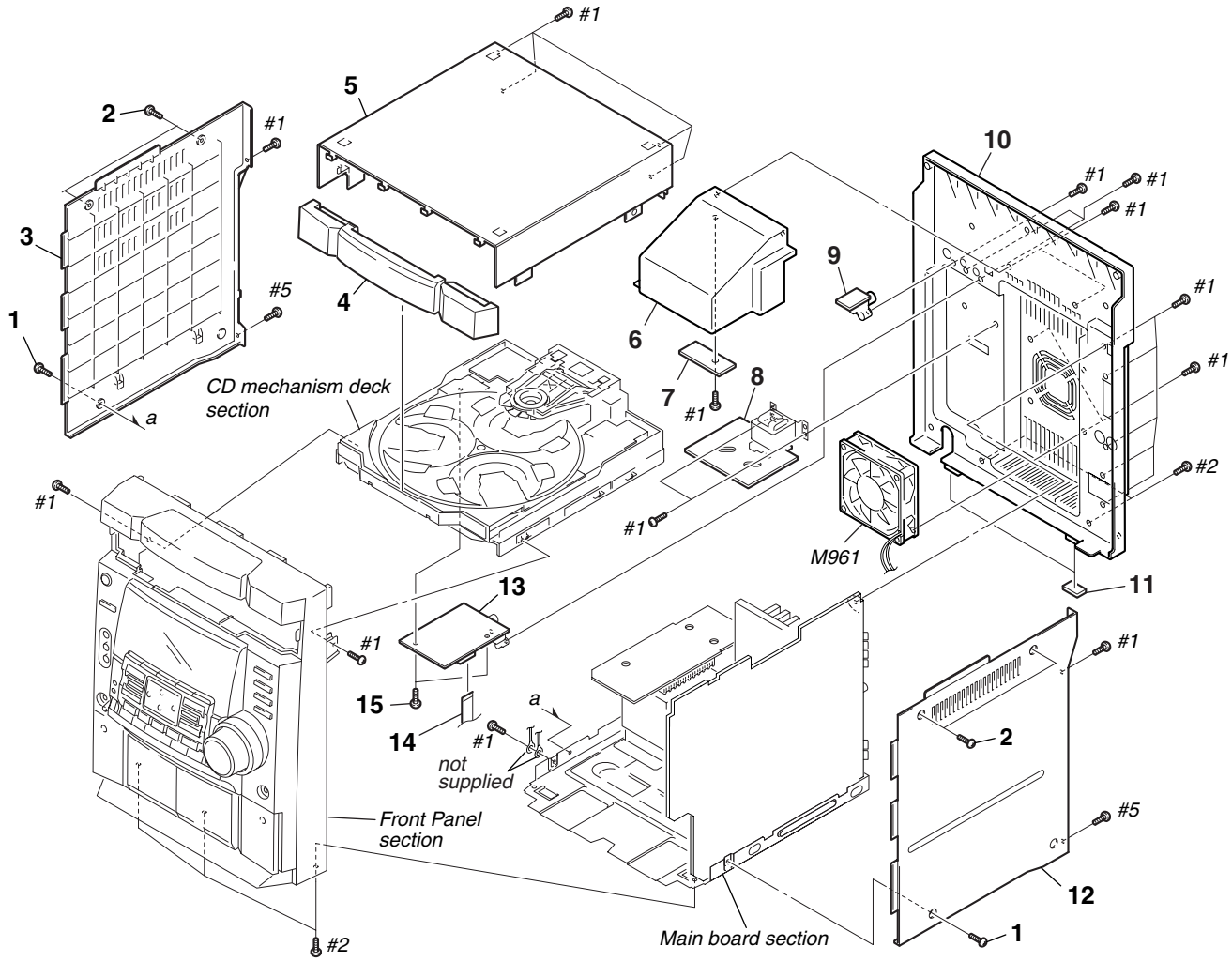
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- Abbreviation
  MY : Malaysia model.
  SP : Singapore model.
  TH : Thai model.
  EA : Saudi Arabia model.
  JE : Tourist model.
  IA : Indonesian model.
  TW : Taiwan model.

- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts of Color Cabinet's Color

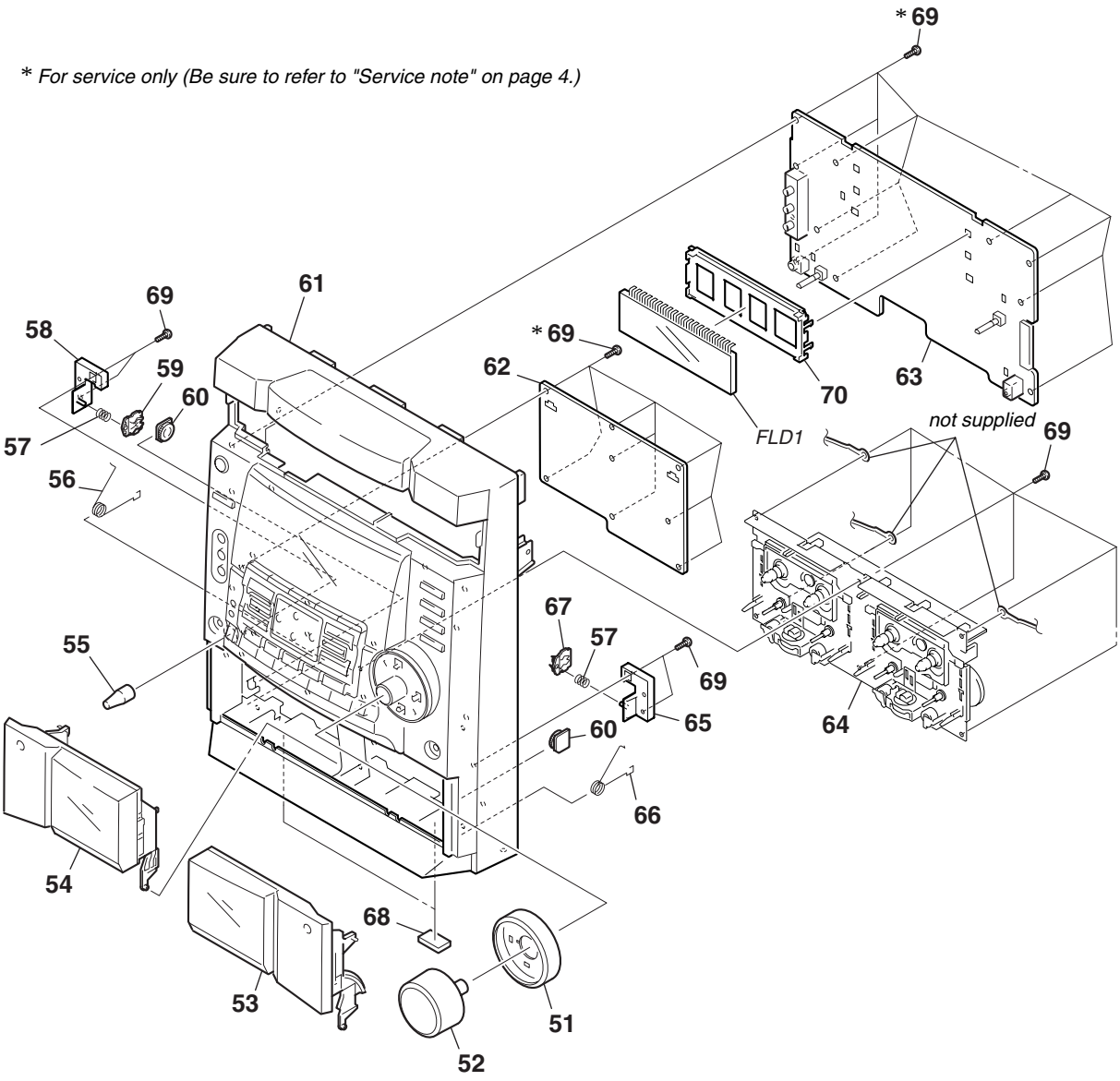
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. MAIN SECTION



Ref. No.	Part No.	Description	Remarks
1	3-363-099-01	SCREW (CASE 3 TP2)	
2	3-363-099-41	SCREW (CASE 3 TP2)	
3	4-224-549-01	CASE (SIDE-L)	
4	4-234-009-71	CD DOOR (BLACK)	
4	4-237-855-01	CD DOOR (SILVER)	
5	4-224-550-01	CASE (TOP)	
6	4-227-984-11	COVER (DUCT)	
7	1-681-442-11	SENSOR BOARD	
8	1-681-445-11	SUB TRANS BOARD	
9	1-681-441-11	VIDEO OUT BOARD	
10	4-234-091-31	PANEL BACK (E,EA,IA,JE,MY,SP,TW)	
10	4-234-091-91	PANEL BACK (TH)	
11	4-225-252-01	CUSHION (FOOT)	
12	X-4952-994-1	CASE (R) ASSY, SIDE	
13	A-4726-022-A	VIDEO CD BOARD, COMPLETE	
14	1-792-246-11	WIRE (FLAT TYPE) (23 CORE)	
15	4-951-620-01	SCREW (2.6X8), +BVTP	
M961	1-763-072-11	FAN, DC	

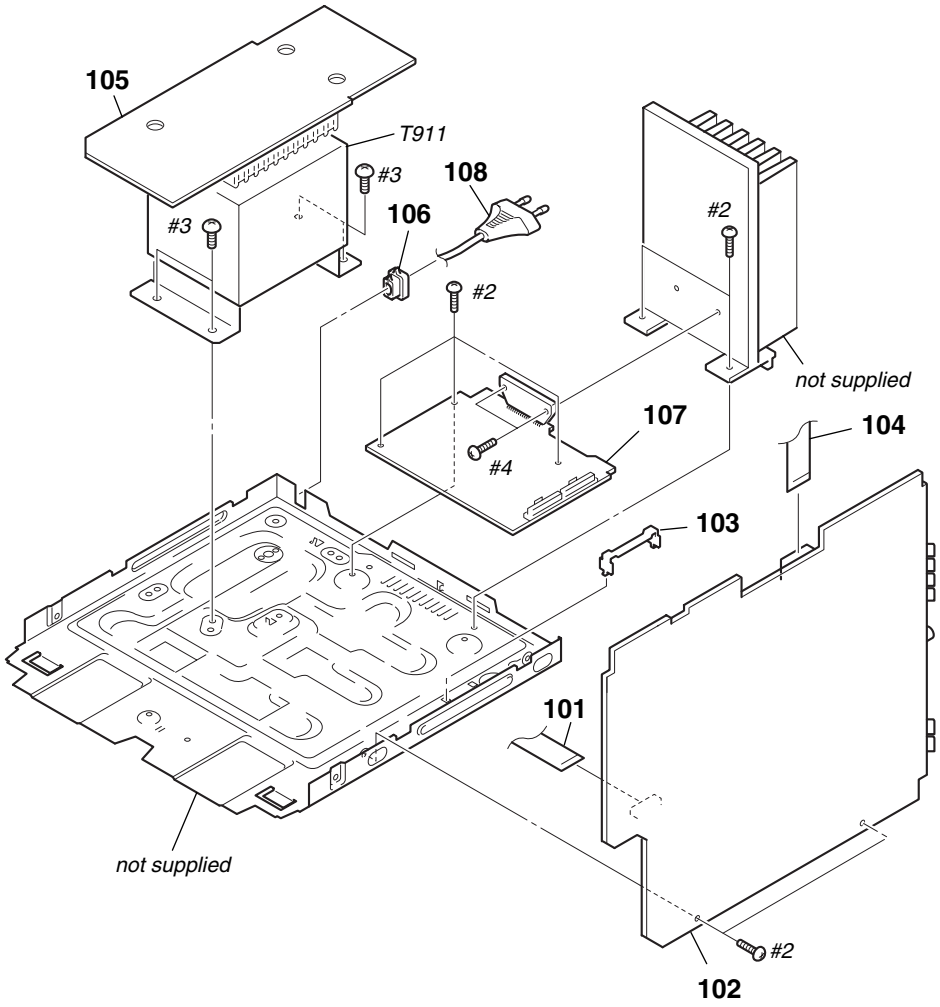
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	4-234-015-01	VOL KNOB RING	
52	4-234-019-11	VOLUME KNOB (BLACK)	
52	4-237-847-01	VOLUME KNOB (SILVER)	
53	X-4953-759-1	CASSETTE WINDOW (R) ASSY (BLACK)	
53	X-4954-350-1	CASSETTE WINDOW (R) ASSY (SILVER)	
54	X-4953-760-1	CASSETTE WINDOW (L) ASSY (BLACK)	
54	X-4954-352-1	CASSETTE WINDOW (L) ASSY (SILVER)	
55	4-231-805-01	KNOB (MIC)	
56	4-233-981-01	CASSETTE DOOR SPRING L	
57	4-224-803-01	SPRING (PUSH), COMPRESSION	
58	4-224-562-01	BRACKET (HEART CAM L)	
59	4-224-560-01	CAM (L), HEART	
60	4-224-104-11	DAMPER	
61	X-4953-840-1	PANEL FRONT ASSY (BLACK)	

Ref. No.	Part No.	Description	Remarks
61	X-4954-353-1	PANEL FRONT ASSY (SILVER)	
62	1-681-447-11	KEY BOARD	
63	A-4476-992-A	PANEL BOARD, COMPLETE (E,EA,IA,JE,MY,SP)	
63	A-4725-701-A	PANEL BOARD, COMPLETE (TW)	
63	A-4726-002-A	PANEL BOARD, COMPLETE (TH)	
64	1-796-124-11	DECK, MECH	
65	4-224-561-01	BRACKET (HEART CAM R)	
66	4-233-982-01	CASSETTE DOOR SPRING R	
67	4-224-559-01	CAM (R), HEART	
68	4-225-252-01	CUSHION (FOOT)	
69	4-951-620-01	SCREW (2.6X8), +BVTP	
70	4-234-016-01	FL HOLDER	
FLD1	1-518-729-11	INDICATOR TUBE, FLUORESCENT	

7-3. MAIN BOARD SECTION

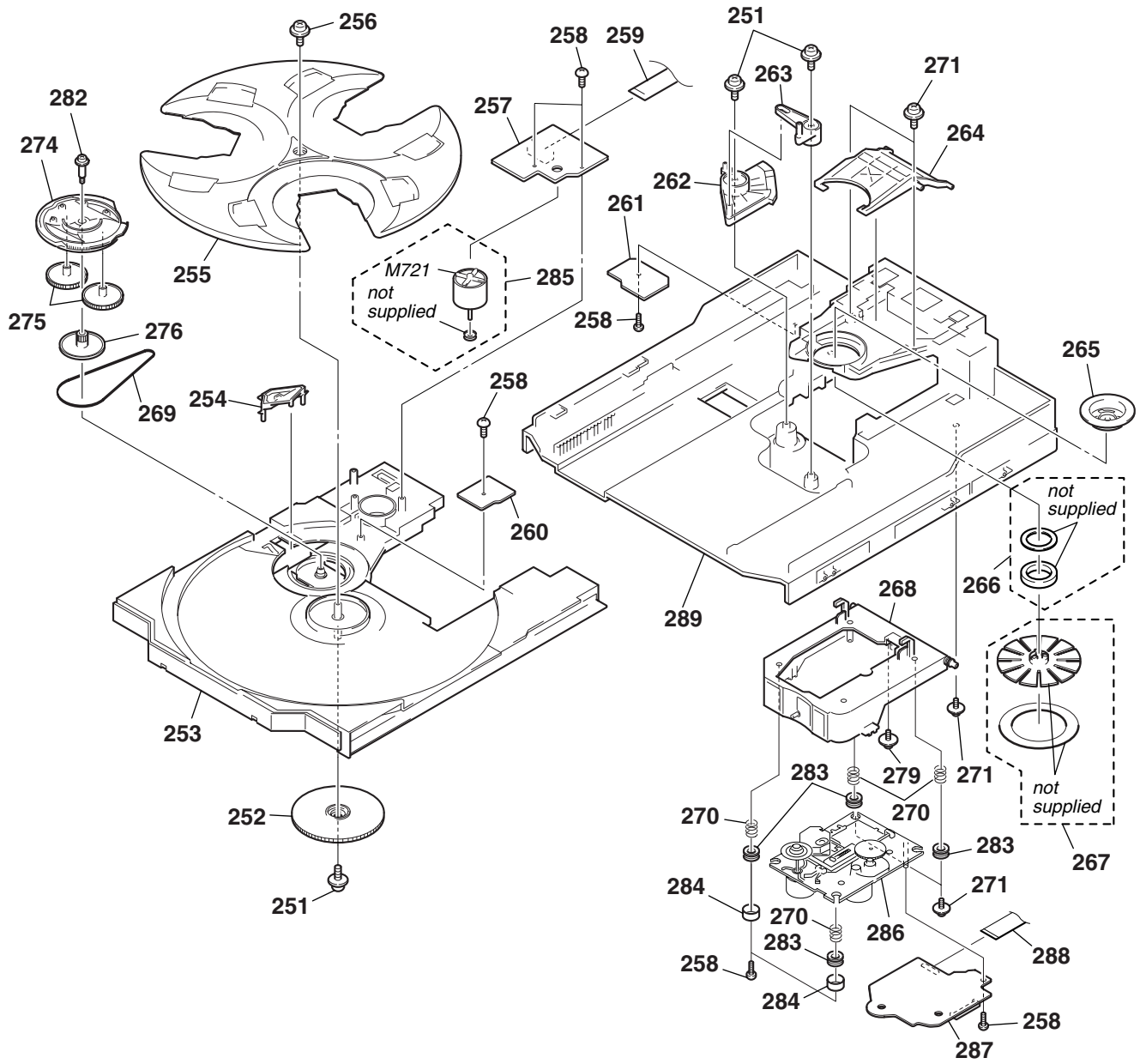


Ref. No.	Part No.	Description	Remarks
101	1-773-049-11	WIRE (FLAT TYPE) (17 CORE)	
102	A-4725-705-A	MAIN BOARD, COMPLETE (E,IA,MY,SP)	
102	A-4725-709-A	MAIN BOARD, COMPLETE (EA)	
102	A-4725-711-A	MAIN BOARD, COMPLETE (TW)	
102	A-4726-010-A	MAIN BOARD, COMPLETE (TH)	
102	A-4726-458-A	MAIN BOARD, COMPLETE (JE)	
* 103	4-988-533-01	HOLDER, PWB	
104	1-769-986-11	WIRE (FLAT TYPE) (13 CORE)	
105	1-681-444-11	TRANS BOARD	
106	3-703-244-00	BUSHING (FBS001), CORD (EA,MY,SP,TW)	

Ref. No.	Part No.	Description	Remarks
106	3-703-571-11	BUSHING (S) (4516), CORD (TH)	
106	4-966-266-01	BUSHING (S) (FBS002), CORD (E,IA,JE)	
107	A-4725-707-A	POWER AMP BOARD, COMPLETE (E,EA,IA,JE,MY,SP)	
107	A-4725-712-A	POWER AMP BOARD, COMPLETE (TW)	
107	A-4726-012-A	POWER AMP BOARD, COMPLETE (TH)	
⚠108	1-777-071-81	CORD, POWER (EA,MY,SP,TW)	
⚠108	1-791-901-11	CORD, POWER (E,IA,JE,TH)	
⚠T911	1-437-222-11	TRANSFORMER, POWER (E,EA,IA,JE,MY,SP,TW)	
⚠T911	1-437-228-11	TRANSFORMER, POWER (TH)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-4. CD MECHANISM DECK SECTION



Ref. No.	Part No.	Description	Remarks
251	4-933-134-11	SCREW (+PTPWH M2.6X8)	
252	4-221-679-01	CAM (RELAY)	
253	4-231-452-01	TABLE (NEW)	
254	4-221-686-01	LEVER (CHANGE)	
255	4-221-676-01	TRAY	
256	4-933-134-51	SCREW (+PTPWH 2.6X8)	
257	1-675-910-14	MOTOR BOARD	
258	4-951-620-01	SCREW (2.6X8), +BVTP	
259	1-791-983-12	WIRE (FLAT TYPE) (8 CORE)	
260	1-675-911-14	ADDRESS SENSOR BOARD	
261	1-675-912-14	DRIVER BOARD	
262	X-4952-608-1	CAM (U/D) ASSY	
263	4-221-681-01	LEVER (EX)	
264	4-221-682-01	LEVER (LIFTER)	
265	4-221-688-01	PULLEY (B), CHUCKING	
266	1-471-035-11	MAGNET ASSY	
267	X-4952-019-1	PULLEY (A) ASSY, CHUCKING	

Ref. No.	Part No.	Description	Remarks
268	X-4951-889-1	HOLDER (BU) ASSY	
269	4-222-095-01	BELT	
270	4-227-045-11	SPRING (INSULATOR), COIL	
271	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
274	4-221-678-01	CAM (CONTROL)	
275	4-221-683-01	GEAR (U)	
276	4-221-685-01	PULLEY (S)	
279	4-227-899-01	SCREW (DIA. 12), FROATING	
282	4-222-097-01	SCREW, STEP	
283	4-227-549-11	INSULATOR	
284	4-231-151-01	STOPPER (BU)	
⚠286	8-820-116-01	OPTICAL PICK-UP KSM-213DCP/Z-NP	
287	A-4725-003-A	BD BOARD, COMPLETE	
288	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
289	4-223-777-03	CHASSIS	
M721	A-4672-826-A	MOTOR ASSY (TURN)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

ADDRESS SENSOR BD

SECTION 8 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- Abbreviation
  MY : Malaysia model.
  SP : Singapore model.
  TH : Thai model.
  EA : Saudi Arabia model.
  JE : Tourist model.
  IA : Indonesian model.
  TW : Taiwan model.

When indicating parts by reference number, please include the board name.

- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
	1-675-911-14	ADDRESS SENSOR BOARD			
		**********			
		< IC >			
IC711	8-749-016-76	IC RPI-321			
		< RESISTOR >			
R711	1-247-876-11	CARBON	75K	5%	1/4W
R712	1-249-409-11	CARBON	220	5%	1/4W F
R713	1-249-429-11	CARBON	10K	5%	1/4W
		< SWITCH >			
S711	1-771-821-11	SWITCH, PUSH (1 KEY) (UP DOWN SW)			
**********					
	A-4725-003-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C110	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT CHIP	100uF	20%	4V
C118	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C119	1-163-106-00	CERAMIC CHIP	36PF	5%	50V
C120	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C121	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C122	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C123	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C124	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C126	1-124-779-00	ELECT CHIP	10uF	20%	16V
C130	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C140	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C141	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C152	1-162-946-11	CAP, CERAMIC	27PF	5%	50V
C154	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C159	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C170	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C180	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C181	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C182	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C183	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C184	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C185	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C186	1-128-065-11	ELECT CHIP	68uF	20%	10V
C187	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-770-706-11	CONNECTOR, FFC/FPC 23P			
CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	8-752-397-42	IC CXD3008Q			
IC102	8-759-640-22	IC BA5982FM			
IC103	8-752-085-51	IC CXA2568M-T6			
IC104	8-759-196-95	IC TC7SH04F(TE85R)			
		< COIL >			
L101	1-414-234-11	FERRITE	0uH		
L102	1-410-377-31	INDUCTOR CHIP	4.7uH		
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR	MSB710-RT1		
		< RESISTOR >			
R101	1-216-077-00	RES-CHIP	15K	5%	1/10W
R102	1-216-097-11	RES-CHIP	100K	5%	1/10W
R103	1-216-077-00	RES-CHIP	15K	5%	1/10W
R104	1-216-085-00	RES-CHIP	33K	5%	1/10W
R105	1-216-073-00	RES-CHIP	10K	5%	1/10W
R106	1-216-049-11	RES-CHIP	1K	5%	1/10W
R107	1-216-073-00	RES-CHIP	10K	5%	1/10W
R108	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
R109	1-216-121-11	RES-CHIP	1M	5%	1/10W
R110	1-216-295-00	SHORT	0		

Ref. No.	Part No.	Description			Remarks
R112	1-216-025-11	RES-CHIP	100	5%	1/10W
R123	1-216-073-00	RES-CHIP	10K	5%	1/10W
R124	1-216-097-11	RES-CHIP	100K	5%	1/10W
R125	1-216-033-00	METAL CHIP	220	5%	1/10W
R126	1-216-033-00	METAL CHIP	220	5%	1/10W
R127	1-216-033-00	METAL CHIP	220	5%	1/10W
R131	1-216-033-00	METAL CHIP	220	5%	1/10W
R135	1-216-295-91	SHORT	0		
R136	1-216-295-00	SHORT	0		
R137	1-216-295-00	SHORT	0		
R138	1-216-295-00	SHORT	0		
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-103-00	METAL CHIP	180K	5%	1/10W
R145	1-216-121-11	RES-CHIP	1M	5%	1/10W
R146	1-216-121-11	RES-CHIP	1M	5%	1/10W
R147	1-216-041-00	METAL CHIP	470	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-003-11	RES-CHIP	12	5%	1/10W
R150	1-216-073-00	RES-CHIP	10K	5%	1/10W
R154	1-216-025-11	RES-CHIP	100	5%	1/10W
R155	1-216-025-11	RES-CHIP	100	5%	1/10W
R156	1-216-025-11	RES-CHIP	100	5%	1/10W
R157	1-216-025-11	RES-CHIP	100	5%	1/10W
R158	1-216-073-00	RES-CHIP	10K	5%	1/10W
R159	1-216-089-00	RES-CHIP	47K	5%	1/10W
R161	1-216-295-00	SHORT	0		
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
R171	1-216-025-11	RES-CHIP	100	5%	1/10W
R172	1-216-025-11	RES-CHIP	100	5%	1/10W
R173	1-216-025-11	RES-CHIP	100	5%	1/10W
R175	1-216-025-11	RES-CHIP	100	5%	1/10W
R180	1-216-097-11	RES-CHIP	100K	5%	1/10W
R181	1-216-100-00	RES-CHIP	130K	5%	1/10W
R182	1-216-081-00	METAL CHIP	22K	5%	1/10W
R183	1-216-081-00	METAL CHIP	22K	5%	1/10W
R184	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R185	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R186	1-216-081-00	METAL CHIP	22K	5%	1/10W
R187	1-216-081-00	METAL CHIP	22K	5%	1/10W
R188	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R189	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R190	1-216-081-00	METAL CHIP	22K	5%	1/10W
R191	1-216-081-00	METAL CHIP	22K	5%	1/10W
R192	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R193	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R194	1-216-295-00	SHORT	0		
R203	1-216-025-11	RES-CHIP	100	5%	1/10W
R204	1-216-025-11	RES-CHIP	100	5%	1/10W
R205	1-216-025-11	RES-CHIP	100	5%	1/10W
R206	1-216-295-00	SHORT	0		
R210	1-216-295-00	SHORT	0		
		< SWITCH >			
S101	1-771-853-11	SWITCH, DETECTION (LIMIT IN)			

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Ref. No.	Part No.	Description			Remarks
	1-675-912-14	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C702	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
CN701	1-785-336-11	PIN, CONNECTOR (LIGHT ANGLE) 10P			
CN702	1-785-550-11	CONNECTOR, FFC/FPC 8P			
		< DIODE >			
D701	8-719-983-15	DIODE MTZJ-T-77-3.9A			
		< IC >			
IC701	8-759-598-69	IC BA6956AN			
		< RESISTOR >			
R701	1-249-411-11	CARBON	330	5%	1/4W
R702	1-249-401-11	CARBON	47	5%	1/4W F

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	1-681-447-11	KEY BOARD			
		**********			
		< DIODE >			
D707	8-719-058-04	DIODE SEL5223S-TP15 (REC PAUSE/START)			
D708	8-719-058-04	DIODE SEL5223S-TP15 (ENTER)			
D709	8-719-057-97	DIODE SEL5923A-TP15 (KARAOKE PON)			
D711	8-719-057-97	DIODE SEL5923A-TP15 (GROOVE)			
		< TRANSISTOR >			
Q707	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q708	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q709	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q712	8-729-900-80	TRANSISTOR	BA1A4M-TP		
		< RESISTOR >			
R703	1-249-413-11	CARBON	470	5%	1/4W F
R704	1-249-414-11	CARBON	560	5%	1/4W F
R705	1-249-415-11	CARBON	680	5%	1/4W F
R706	1-249-417-11	CARBON	1K	5%	1/4W F
R707	1-249-418-11	CARBON	1.2K	5%	1/4W F
R708	1-249-420-11	CARBON	1.8K	5%	1/4W F
R709	1-249-422-11	CARBON	2.7K	5%	1/4W F
R710	1-247-843-11	CARBON	3.3K	5%	1/4W
R711	1-249-425-11	CARBON	4.7K	5%	1/4W F
R713	1-249-410-11	CARBON	270	5%	1/4W F
R714	1-249-411-11	CARBON	330	5%	1/4W
R715	1-249-413-11	CARBON	470	5%	1/4W F
R716	1-249-414-11	CARBON	560	5%	1/4W F
R717	1-249-415-11	CARBON	680	5%	1/4W F
R718	1-249-417-11	CARBON	1K	5%	1/4W F
R719	1-249-418-11	CARBON	1.2K	5%	1/4W F
R720	1-249-420-11	CARBON	1.8K	5%	1/4W F
R721	1-249-422-11	CARBON	2.7K	5%	1/4W F
R726	1-249-410-11	CARBON	270	5%	1/4W F
R727	1-249-411-11	CARBON	330	5%	1/4W

KEY **MAIN**

Ref. No.	Part No.	Description			Remarks
R728	1-249-413-11	CARBON	470	5%	1/4W F
R729	1-249-414-11	CARBON	560	5%	1/4W F
R730	1-249-415-11	CARBON	680	5%	1/4W F
R731	1-249-417-11	CARBON	1K	5%	1/4W F
R732	1-249-418-11	CARBON	1.2K	5%	1/4W F
R733	1-249-420-11	CARBON	1.8K	5%	1/4W F
R734	1-249-422-11	CARBON	2.7K	5%	1/4W F
R735	1-247-843-11	CARBON	3.3K	5%	1/4W
R736	1-249-425-11	CARBON	4.7K	5%	1/4W F
R737	1-249-427-11	CARBON	6.8K	5%	1/4W F
R745	1-249-411-11	CARBON	330	5%	1/4W
R746	1-249-411-11	CARBON	330	5%	1/4W
R797	1-249-411-11	CARBON	330	5%	1/4W
R804	1-249-411-11	CARBON	330	5%	1/4W
		< SWITCH >			
S703	1-762-875-21	SWITCH, KEYBOARD (GROOVE)			
S704	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP EX-CHANGE)			
S705	1-762-875-21	SWITCH, KEYBOARD (DISC 1)			
S706	1-762-875-21	SWITCH, KEYBOARD (DISC 2)			
S707	1-762-875-21	SWITCH, KEYBOARD (DISC 3)			
S708	1-762-875-21	SWITCH, KEYBOARD (⏏ OPEN/CLOSE)			
S709	1-762-875-21	SWITCH, KEYBOARD (▲)			
S710	1-762-875-21	SWITCH, KEYBOARD (▼)			
S711	1-762-875-21	SWITCH, KEYBOARD (PICTURE EFECT)			
S712	1-762-875-21	SWITCH, KEYBOARD (KARAOKE PON)			
S713	1-762-875-21	SWITCH, KEYBOARD (◀◀ -)			
S714	1-762-875-21	SWITCH, KEYBOARD (I◀◀)			
S715	1-762-875-21	SWITCH, KEYBOARD (■)			
S716	1-762-875-21	SWITCH, KEYBOARD (◁▷)			
S717	1-762-875-21	SWITCH, KEYBOARD (❚❚)			
S718	1-762-875-21	SWITCH, KEYBOARD (▶▶I)			
S719	1-762-875-21	SWITCH, KEYBOARD (+ ▶▶)			
S720	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)			
S721	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)			
S726	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
S727	1-762-875-21	SWITCH, KEYBOARD (SPECTRUM)			
S728	1-762-875-21	SWITCH, KEYBOARD (DIRECTION/EDIT)			
S729	1-762-875-21	SWITCH, KEYBOARD (STEREO/MONO/REPEAT)			
S730	1-762-875-21	SWITCH, KEYBOARD (TUNER MEMORY/PLAY MODE)			
S731	1-762-875-21	SWITCH, KEYBOARD (GAME EQ)			
S732	1-762-875-21	SWITCH, KEYBOARD (ENTER)			
S733	1-762-875-21	SWITCH, KEYBOARD (P FILE)			
S734	1-762-875-21	SWITCH, KEYBOARD (▶)			
S735	1-762-875-21	SWITCH, KEYBOARD (◀)			
S736	1-762-875-21	SWITCH, KEYBOARD (MUSIC EQ)			
S737	1-762-875-21	SWITCH, KEYBOARD (EFFECT ON/OFF)			
S738	1-762-875-21	SWITCH, KEYBOARD (MOVE EQ)			

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Ref. No.	Part No.	Description			Remarks
	A-4725-705-A	MAIN BOARD, COMPLETE (E,IA,MY,SP)			
		**********			
	A-4725-709-A	MAIN BOARD, COMPLETE (EA)			
		**********			
	A-4725-711-A	MAIN BOARD, COMPLETE (TW)			
		**********			
	A-4726-010-A	MAIN BOARD, COMPLETE (TH)			
		**********			
	A-4726-458-A	MAIN BOARD, COMPLETE (JE)			
		**********			
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S	
	7-685-872-09	SCREW +BVTT	3X8	(S)	
		< CAPACITOR >			
C101	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-126-947-11	ELECT	47uF	20%	16V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-126-933-11	ELECT	100uF	20%	16V
C107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-126-964-11	ELECT	10uF	20%	50V
C109	1-162-935-11	CERAMIC CHIP	4PF	0.25PF	50V
C110	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C111	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C112	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C113	1-126-959-11	ELECT	0.47uF	20%	50V
C114	1-126-947-11	ELECT	47uF	20%	16V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C116	1-126-961-11	ELECT	2.2uF	20%	50V
C117	1-126-947-11	ELECT	47uF	20%	16V
C118	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C119	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C121	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C122	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C123	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C124	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C125	1-126-947-11	ELECT	47uF	20%	16V
C126	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C127	1-126-960-11	ELECT	1uF	20%	50V
C128	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C129	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C130	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C131	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C132	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C133	1-126-957-11	ELECT	0.22uF	20%	50V
C134	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V
C135	1-126-963-11	ELECT	4.7uF	20%	50V
C136	1-126-963-11	ELECT	4.7uF	20%	50V
C137	1-126-964-11	ELECT	10uF	20%	50V
C139	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C140	1-126-960-11	ELECT	1uF	20%	50V
C141	1-104-760-11	CERAMIC CHIP	0.047uF	10%	50V

Ref. No.	Part No.	Description			Remarks
C142	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C143	1-126-965-91	ELECT	22uF	20%	50V
C144	1-126-947-11	ELECT	47uF	20%	16V
C201	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C202	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C203	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C204	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C205	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C206	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C207	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C208	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C209	1-126-947-11	ELECT	47uF	20%	16V
C210	1-126-947-11	ELECT	47uF	20%	16V
C211	1-130-486-00	MYLAR	0.018uF	10%	50V
C212	1-130-486-00	MYLAR	0.018uF	10%	50V
C213	1-126-960-11	ELECT	1uF	20%	50V
C214	1-126-960-11	ELECT	1uF	20%	50V
C215	1-126-961-11	ELECT	2.2uF	20%	50V
C217	1-126-947-11	ELECT	47uF	20%	16V
C218	1-126-947-11	ELECT	47uF	20%	16V
C219	1-126-961-11	ELECT	2.2uF	20%	50V
C221	1-126-963-11	ELECT	4.7uF	20%	50V
C222	1-126-963-11	ELECT	4.7uF	20%	50V
C223	1-130-487-00	MYLAR	0.022uF	5%	50V
C224	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C225	1-126-963-11	ELECT	4.7uF	20%	50V
C226	1-162-977-11	CERAMIC CHIP	0.0018uF	10%	50V
C227	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C228	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C229	1-104-665-11	ELECT	100uF	20%	10V
C230	1-104-665-11	ELECT	100uF	20%	10V
C231	1-126-959-11	ELECT	0.47uF	20%	50V
C232	1-126-959-11	ELECT	0.47uF	20%	50V
C233	1-130-491-00	MYLAR	0.047uF	5%	50V
C234	1-130-491-00	MYLAR	0.047uF	5%	50V
C235	1-126-960-11	ELECT	1uF	20%	50V
C236	1-126-933-11	ELECT	100uF	20%	16V
C237	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C238	1-162-977-11	CERAMIC CHIP	0.0018uF	10%	50V
C239	1-130-485-00	MYLAR	0.015uF	5%	50V
C240	1-126-947-11	ELECT	47uF	20%	16V
C241	1-130-479-00	MYLAR	0.0047uF	5%	50V
C242	1-130-471-00	MYLAR	0.001uF	5%	50V
C243	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C244	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C256	1-126-960-11	ELECT	1uF	20%	50V
C257	1-126-956-00	ELECT	0.1uF	20%	50V
C265	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C266	1-162-995-11	CERAMIC CHIP	0.022uF	50V	
C270	1-126-933-11	ELECT	100uF	20%	16V
C271	1-126-960-11	ELECT	1uF	20%	50V
C272	1-126-960-11	ELECT	1uF	20%	50V
C300	1-136-165-00	FILM	0.1uF	5%	50V
C301	1-126-963-11	ELECT	4.7uF	20%	50V
C302	1-126-963-11	ELECT	4.7uF	20%	50V
C303	1-126-963-11	ELECT	4.7uF	20%	50V
C304	1-126-963-11	ELECT	4.7uF	20%	50V
C305	1-126-963-11	ELECT	4.7uF	20%	50V
C306	1-126-963-11	ELECT	4.7uF	20%	50V
C307	1-126-963-11	ELECT	4.7uF	20%	50V
C308	1-126-963-11	ELECT	4.7uF	20%	50V
C309	1-126-963-11	ELECT	4.7uF	20%	50V
C310	1-126-963-11	ELECT	4.7uF	20%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-136-165-00	FILM	0.1uF	5%	50V
C313	1-130-491-00	MYLAR	0.047uF	5%	50V
C314	1-126-963-11	ELECT	4.7uF	20%	50V
C315	1-126-963-11	ELECT	4.7uF	20%	50V
C316	1-126-963-11	ELECT	4.7uF	20%	50V
C317	1-136-169-00	FILM	0.22uF	5%	50V
C318	1-136-169-00	FILM	0.22uF	5%	50V
C319	1-136-169-00	FILM	0.22uF	5%	50V
C320	1-136-169-00	FILM	0.22uF	5%	50V
C321	1-136-171-00	FILM	0.33uF	5%	50V
C322	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C323	1-126-963-11	ELECT	4.7uF	20%	50V
C324	1-126-963-11	ELECT	4.7uF	20%	50V
C325	1-130-487-00	MYLAR	0.022uF	5%	50V
C326	1-130-487-00	MYLAR	0.022uF	5%	50V
C327	1-130-487-00	MYLAR	0.022uF	5%	50V
C328	1-130-487-00	MYLAR	0.022uF	5%	50V
C333	1-130-475-00	MYLAR	0.0022uF	5%	50V
C334	1-130-475-00	MYLAR	0.0022uF	5%	50V
C337	1-130-491-00	MYLAR	0.047uF	5%	50V
C338	1-130-491-00	MYLAR	0.047uF	5%	50V
C339	1-130-491-00	MYLAR	0.047uF	5%	50V
C340	1-130-491-00	MYLAR	0.047uF	5%	50V
C342	1-136-165-00	FILM	0.1uF	5%	50V
C343	1-136-165-00	FILM	0.1uF	5%	50V
C344	1-126-964-11	ELECT	10uF	20%	50V
C345	1-126-934-11	ELECT	220uF	20%	16V
C346	1-136-170-00	FILM	0.27uF	5%	50V
C347	1-126-964-11	ELECT	10uF	20%	50V
C348	1-126-964-11	ELECT	10uF	20%	50V
C349	1-104-665-11	ELECT	100uF	20%	10V
C350	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C351	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C352	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C353	1-126-963-11	ELECT	4.7uF	20%	50V
C354	1-126-963-11	ELECT	4.7uF	20%	50V
C355	1-126-963-11	ELECT	4.7uF	20%	50V
C356	1-126-963-11	ELECT	4.7uF	20%	50V
C357	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C358	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C359	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C360	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C361	1-107-721-11	ELECT	4.7uF	20%	100V
C362	1-107-721-11	ELECT	4.7uF	20%	100V
C363	1-107-717-11	ELECT	47uF	20%	50V
C364	1-109-953-11	ELECT	2.2uF	20%	50V
C365	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C366	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C375	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C376	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C377	1-126-963-11	ELECT	4.7uF	20%	50V
C378	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C381	1-104-665-11	ELECT	100uF	20%	10V
C382	1-126-961-11	ELECT	2.2uF	20%	50V
C383	1-126-961-11	ELECT	2.2uF	20%	50V
C601	1-164-156-11	CERAMIC CHIP	0.1uF		25V

MAIN

Ref. No.	Part No.	Description			Remarks
C602	1-126-964-11	ELECT	10uF	20%	50V
C603	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C604	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C605	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C606	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C607	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C608	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C610	1-126-964-11	ELECT	10uF	20%	50V
C611	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C612	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C613	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C644	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C656	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C657	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C658	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C659	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C660	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C661	1-126-965-11	ELECT	22uF	20%	50V
C662	1-136-165-00	FILM	0.1uF	5%	50V
C663	1-136-165-00	FILM	0.1uF	5%	50V
C664	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C665	1-126-916-11	ELECT	1000uF	20%	6.3V
C666	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C671	1-126-916-11	ELECT	1000uF	20%	6.3V
C672	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C673	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C674	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C675	1-126-935-11	ELECT	470uF	20%	10V
C676	1-104-665-11	ELECT	100uF	20%	10V
C677	1-126-935-11	ELECT	470uF	20%	10V
C681	1-136-165-00	FILM	0.1uF	5%	50V
C683	1-136-165-00	FILM	0.1uF	5%	50V
C684	1-136-165-00	FILM	0.1uF	5%	50V
C685	1-126-937-11	ELECT	4700uF	20%	16V
C686	1-126-964-11	ELECT	10uF	20%	50V
C687	1-126-917-11	ELECT	3300uF	20%	6.3V
C688	1-126-964-11	ELECT	10uF	20%	50V
C689	1-104-665-11	ELECT	100uF	20%	10V
C690	1-126-964-11	ELECT	10uF	20%	50V
C691	1-126-933-11	ELECT	100uF	20%	16V
C692	1-126-935-11	ELECT	470uF	20%	16V
C693	1-130-483-00	MYLAR	0.01uF	5%	50V
C694	1-130-483-00	MYLAR	0.01uF	5%	50V
C697	1-126-943-11	ELECT	2200uF	20%	25V
C698	1-126-964-11	ELECT	10uF	20%	50V
C699	1-126-935-11	ELECT	470uF	20%	16V
C235A	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C236A	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
		< FILTER >			
CF101	1-760-023-11	FILTER, CERAMIC			
CF102	1-760-023-11	FILTER, CERAMIC			

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
CN1	1-785-336-11	PIN, CONNECTOR(LIGHT ANGLE)10P	
CN2	1-784-778-11	CONNECTOR, FFC 17P	
CN5	1-564-506-11	PLUG, CONNECTOR 3P	
CN102	1-784-735-11	CONNECTOR, FFC 13P	
CN402	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P	
CN403	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P	
CN701	1-793-766-11	CONNECTOR, BOARD TO BOARD 30P	
		< DIODE >	
D101	8-719-914-42	DIODE DA204K-T-146	
D104	8-719-978-33	DIODE UDZSTE-176.8B	
D108	8-719-988-61	DIODE 1SS355TE-17	
D203	8-719-988-61	DIODE 1SS355TE-17	
D204	8-719-988-61	DIODE 1SS355TE-17	
D205	8-719-988-61	DIODE 1SS355TE-17	
D206	8-719-988-61	DIODE 1SS355TE-17	
D207	8-719-988-61	DIODE 1SS355TE-17	
D301	8-719-069-60	DIODE UDZSTE-179.1B	
D302	8-719-988-61	DIODE 1SS355TE-17	
D303	8-719-988-61	DIODE 1SS355TE-17	
D361	8-719-988-61	DIODE 1SS355TE-17	
D371	8-719-988-61	DIODE 1SS355TE-17	
D372	8-719-988-61	DIODE 1SS355TE-17	
D374	8-719-988-61	DIODE 1SS355TE-17	
D383	8-719-988-61	DIODE 1SS355TE-17	
D601	8-719-988-61	DIODE 1SS355TE-17	
D602	8-719-988-61	DIODE 1SS355TE-17	
D603	1-216-864-11	METAL CHIP 0 5%	1/16W
D661	8-719-988-61	DIODE 1SS355TE-17	
D662	8-719-988-61	DIODE 1SS355TE-17	
D663	8-719-988-61	DIODE 1SS355TE-17	
D664	8-719-988-61	DIODE 1SS355TE-17	
D665	8-719-988-61	DIODE 1SS355TE-17	
D666	8-719-988-61	DIODE 1SS355TE-17	
D667	8-719-988-61	DIODE 1SS355TE-17	
D668	8-719-988-61	DIODE 1SS355TE-17	
D669	8-719-988-61	DIODE 1SS355TE-17	
D670	8-719-988-61	DIODE 1SS355TE-17	
D681	8-719-080-70	DIODE 11EQS04N-TB5	
D682	8-719-080-70	DIODE 11EQS04N-TB5	
D683	8-719-080-70	DIODE 11EQS04N-TB5	
D684	8-719-080-70	DIODE 11EQS04N-TB5	
D685	8-719-988-61	DIODE 1SS355TE-17	
D686	8-719-988-61	DIODE 1SS355TE-17	
D687	8-719-083-89	DIODE 11ES2N-TB5	
D688	8-719-083-89	DIODE 11ES2N-TB5	
D689	8-719-083-89	DIODE 11ES2N-TB5	
D690	8-719-083-89	DIODE 11ES2N-TB5	
D691	8-719-083-89	DIODE 11ES2N-TB5	
D692	8-719-083-89	DIODE 11ES2N-TB5	
D693	8-719-083-89	DIODE 11ES2N-TB5	
D694	8-719-083-89	DIODE 11ES2N-TB5	
D695	8-719-083-89	DIODE 11ES2N-TB5	

Ref. No.	Part No.	Description			Remarks
		< FERRITE BEAD >			
FB1	1-550-907-21	FERRITE	0uH (TW)		
FB1	1-216-864-11	METAL CHIP	0	5%	1/16W (E,EA,IA,JE,MY,SP,TH)
FB2	1-550-907-21	FERRITE	0uH (TW)		
FB2	1-216-864-11	METAL CHIP	0	5%	1/16W (E,EA,IA,JE,MY,SP,TH)
FB3	1-550-907-21	FERRITE	0uH (TW)		
FB3	1-216-864-11	METAL CHIP	0	5%	1/16W (E,EA,IA,JE,MY,SP,TH)
FB4	1-216-864-11	METAL CHIP	0	5%	1/16W
FB5	1-216-864-11	METAL CHIP	0	5%	1/16W
FB6	1-216-864-11	METAL CHIP	0	5%	1/16W
FB7	1-469-711-21	INDUCTOR	0uH		
		< FRONT END >			
FE101	1-693-507-11	FRONT END (3 GANG) (JE)			
FE101	1-693-477-11	FRONT END (3 GANGS) (E,EA,IA,MY,SP,TH,TW)			
		< TERMINAL >			
* GND1	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC101	8-759-652-00	IC BA1450			
IC102	8-759-288-54	IC LC72130			
IC201	8-759-242-58	IC TA8189N			
IC301	8-759-832-80	IC BH3878KS2			
IC302	8-759-652-01	IC LA2615			
IC401	8-759-829-83	IC M30622MAA-A98FP			
IC661	8-759-635-63	IC M51943BSL-TP			
IC681	8-759-039-69	IC uPC7805AHF			
IC682	8-759-039-69	IC uPC7805AHF			
IC683	8-759-088-08	IC uPC7812AHF			
IC684	8-759-701-59	IC M5F7809L			
		< IFT >			
IFT101	1-435-295-11	TRANSFORMER, IF			
		< JACK >			
JK301	1-770-613-11	JACK, PIN 4P (AUDIO IN)			
JK302	1-694-635-11	TERMINAL BOARD (4P) (SPEAKER)			
		< JUMPER RESISTOR >			
JR1	1-216-864-11	METAL CHIP	0	5%	1/16W
JR4	1-216-864-11	METAL CHIP	0	5%	1/16W
JR7	1-216-864-11	METAL CHIP	0	5%	1/16W
JR8	1-216-864-11	METAL CHIP	0	5%	1/16W
JR10	1-216-864-11	METAL CHIP	0	5%	1/16W
JR11	1-216-864-11	METAL CHIP	0	5%	1/16W
JR14	1-216-864-11	METAL CHIP	0	5%	1/16W
JR15	1-216-864-11	METAL CHIP	0	5%	1/16W
JR17	1-216-864-11	METAL CHIP	0	5%	1/16W
JR109	1-216-864-11	METAL CHIP	0	5%	1/16W
JR602	1-216-864-11	METAL CHIP	0	5%	1/16W
JR603	1-216-864-11	METAL CHIP	0	5%	1/16W
JR606	1-216-864-11	METAL CHIP	0	5%	1/16W
JR607	1-216-864-11	METAL CHIP	0	5%	1/16W
JR633	1-216-864-11	METAL CHIP	0	5%	1/16W
JR634	1-216-864-11	METAL CHIP	0	5%	1/16W
JR635	1-216-864-11	METAL CHIP	0	5%	1/16W
JR638	1-216-864-11	METAL CHIP	0	5%	1/16W
JR641	1-216-864-11	METAL CHIP	0	5%	1/16W
JR642	1-216-864-11	METAL CHIP	0	5%	1/16W
		< COIL >			
L107	1-216-864-11	METAL CHIP	0	5%	1/16W
L201	1-437-220-11	TRANSFORMER, BIAS OSCILLATION			
L671	1-414-189-31	INDUCTOR	100uH		
		< OPTICAL OUTPUT >			
PH671	8-749-923-04	IC TOTX178A			
		< TRANSISTOR >			
Q101	8-729-922-66	TRANSISTOR	2SC2410S-TPNP		
Q102	8-729-422-57	TRANSISTOR	BN1A4M-TP		
Q103	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q104	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR		
Q210	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q211	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q212	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q213	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q214	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q215	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q216	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q217	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q218	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q219	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q220	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q221	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q222	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q223	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
Q224	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q225	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q226	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q227	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q228	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q229	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q230	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q301	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q302	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q361	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q362	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q363	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q364	8-729-141-30	TRANSISTOR	2SC3623ATP-LK		
Q365	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q371	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q373	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q381	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q382	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q383	8-729-119-76	TRANSISTOR	2SA1175TP-HFE		
Q384	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q385	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q386	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q387	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q601	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q602	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q603	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q604	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		

MAIN

Ref. No.	Part No.	Description			Remarks
Q605	8-729-900-80	TRANSISTOR	BA1A4M-TP		
Q606	8-729-116-57	TRANSISTOR	2SB1068TP-K		
Q661	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q681	8-729-141-83	TRANSISTOR	2SB1375		
Q682	8-729-900-80	TRANSISTOR	BA1A4M-TP		
		< RESISTOR >			
R3	1-216-864-11	METAL CHIP	0	5%	1/16W
R4	1-216-864-11	METAL CHIP	0	5%	1/16W
R7	1-216-864-11	METAL CHIP	0	5%	1/16W
R101	1-216-805-11	METAL CHIP	47	5%	1/16W
R102	1-216-819-11	METAL CHIP	680	5%	1/16W
R103	1-216-819-11	METAL CHIP	680	5%	1/16W
R104	1-216-811-11	METAL CHIP	150	5%	1/16W
R105	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R106	1-216-815-11	METAL CHIP	330	5%	1/16W
R107	1-216-864-11	METAL CHIP	0	5%	1/16W
R108	1-216-815-11	METAL CHIP	330	5%	1/16W
R109	1-216-805-11	METAL CHIP	47	5%	1/16W
R110	1-216-833-11	METAL CHIP	10K	5%	1/16W
R111	1-216-809-11	METAL CHIP	100	5%	1/16W
R112	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R114	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R115	1-216-833-11	METAL CHIP	10K	5%	1/16W
R116	1-216-809-11	METAL CHIP	100	5%	1/16W
R117	1-216-845-11	METAL CHIP	100K	5%	1/16W
R118	1-216-809-11	METAL CHIP	100	5%	1/16W
R119	1-216-833-11	METAL CHIP	10K	5%	1/16W
R120	1-216-833-11	METAL CHIP	10K	5%	1/16W
R121	1-216-821-11	METAL CHIP	1K	5%	1/16W
R122	1-216-833-11	METAL CHIP	10K	5%	1/16W
R123	1-216-833-11	METAL CHIP	10K	5%	1/16W
R124	1-216-813-11	METAL CHIP	220	5%	1/16W
R125	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R126	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R127	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R128	1-216-818-11	METAL CHIP	560	5%	1/16W
R129	1-216-818-11	METAL CHIP	560	5%	1/16W
R130	1-216-833-11	METAL CHIP	10K	5%	1/16W
R131	1-216-834-11	METAL CHIP	12K	5%	1/16W
R132	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R133	1-216-817-11	METAL CHIP	470	5%	1/16W
R134	1-216-817-11	METAL CHIP	470	5%	1/16W
R135	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R136	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R137	1-216-809-11	METAL CHIP	100	5%	1/16W
R138	1-216-809-11	METAL CHIP	100	5%	1/16W
R139	1-216-864-11	METAL CHIP	0	5%	1/16W
R201	1-216-797-11	METAL CHIP	10	5%	1/16W
R202	1-216-797-11	METAL CHIP	10	5%	1/16W
R203	1-216-797-11	METAL CHIP	10	5%	1/16W
R204	1-216-797-11	METAL CHIP	10	5%	1/16W
R205	1-216-805-11	METAL CHIP	47	5%	1/16W
R206	1-216-805-11	METAL CHIP	47	5%	1/16W
R207	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R208	1-216-832-11	METAL CHIP	8.2K	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R209	1-216-850-11	METAL CHIP	270K	5%	1/16W
R210	1-216-850-11	METAL CHIP	270K	5%	1/16W
R214	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R215	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R216	1-216-845-11	METAL CHIP	100K	5%	1/16W
R217	1-216-833-11	METAL CHIP	10K	5%	1/16W
R218	1-216-848-11	METAL CHIP	180K	5%	1/16W
R219	1-216-833-11	METAL CHIP	10K	5%	1/16W
R220	1-216-837-11	METAL CHIP	22K	5%	1/16W
R221	1-216-833-11	METAL CHIP	10K	5%	1/16W
R222	1-216-813-11	METAL CHIP	220	5%	1/16W
R223	1-216-848-11	METAL CHIP	180K	5%	1/16W
R224	1-216-848-11	METAL CHIP	180K	5%	1/16W
R225	1-216-837-11	METAL CHIP	22K	5%	1/16W
R226	1-216-837-11	METAL CHIP	22K	5%	1/16W
R227	1-216-846-11	METAL CHIP	120K	5%	1/16W
R228	1-216-846-11	METAL CHIP	120K	5%	1/16W
R229	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R230	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R231	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R232	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R233	1-216-843-11	METAL CHIP	68K	5%	1/16W
R234	1-216-843-11	METAL CHIP	68K	5%	1/16W
R235	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R236	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R237	1-216-833-11	METAL CHIP	10K	5%	1/16W
R238	1-216-855-11	METAL CHIP	680K	5%	1/16W
R239	1-216-833-11	METAL CHIP	10K	5%	1/16W
R240	1-216-833-11	METAL CHIP	10K	5%	1/16W
R241	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R242	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R243	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R244	1-216-838-11	METAL CHIP	27K	5%	1/16W
R245	1-216-833-11	METAL CHIP	10K	5%	1/16W
R246	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R247	1-216-845-11	METAL CHIP	100K	5%	1/16W
R248	1-216-834-11	METAL CHIP	12K	5%	1/16W
R249	1-216-855-11	METAL CHIP	680K	5%	1/16W
R250	1-216-848-11	METAL CHIP	180K	5%	1/16W
R251	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R252	1-216-838-11	METAL CHIP	27K	5%	1/16W
R253	1-216-833-11	METAL CHIP	10K	5%	1/16W
R254	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R255	1-216-821-11	METAL CHIP	1K	5%	1/16W
R256	1-216-833-11	METAL CHIP	10K	5%	1/16W
R257	1-216-816-11	METAL CHIP	390	5%	1/16W
R258	1-216-813-11	METAL CHIP	220	5%	1/16W
R259	1-216-821-11	METAL CHIP	1K	5%	1/16W
R260	1-216-816-11	METAL CHIP	390	5%	1/16W
R261	1-216-816-11	METAL CHIP	390	5%	1/16W
R262	1-216-845-11	METAL CHIP	100K	5%	1/16W
R263	1-216-833-11	METAL CHIP	10K	5%	1/16W
R264	1-216-833-11	METAL CHIP	10K	5%	1/16W
R270	1-216-813-11	METAL CHIP	220	5%	1/16W
R271	1-216-857-11	METAL CHIP	1M	5%	1/16W

Ref. No.	Part No.	Description			Remarks
R272	1-216-857-11	METAL CHIP	1M	5%	1/16W
R273	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R274	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R275	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R276	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R277	1-216-845-11	METAL CHIP	100K	5%	1/16W
R278	1-216-845-11	METAL CHIP	100K	5%	1/16W
R301	1-216-833-11	METAL CHIP	10K	5%	1/16W
R302	1-216-833-11	METAL CHIP	10K	5%	1/16W
R303	1-216-838-11	METAL CHIP	27K	5%	1/16W
R304	1-216-838-11	METAL CHIP	27K	5%	1/16W
R305	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R306	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R307	1-216-835-11	METAL CHIP	15K	5%	1/16W
R308	1-216-835-11	METAL CHIP	15K	5%	1/16W
R309	1-216-857-11	METAL CHIP	1M	5%	1/16W
R311	1-216-845-11	METAL CHIP	100K	5%	1/16W
R312	1-216-845-11	METAL CHIP	100K	5%	1/16W
R313	1-216-845-11	METAL CHIP	100K	5%	1/16W
R314	1-216-845-11	METAL CHIP	100K	5%	1/16W
R315	1-216-839-11	METAL CHIP	33K	5%	1/16W
R316	1-216-839-11	METAL CHIP	33K	5%	1/16W
R317	1-216-845-11	METAL CHIP	100K	5%	1/16W
R318	1-216-850-11	METAL CHIP	270K	5%	1/16W
R320	1-216-847-11	METAL CHIP	150K	5%	1/16W
R321	1-216-833-11	METAL CHIP	10K	5%	1/16W
R322	1-216-833-11	METAL CHIP	10K	5%	1/16W
R323	1-216-813-11	METAL CHIP	220	5%	1/16W
R324	1-216-834-11	METAL CHIP	12K	5%	1/16W
R325	1-216-835-11	METAL CHIP	15K	5%	1/16W
R326	1-216-833-11	METAL CHIP	10K	5%	1/16W
R327	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R328	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R329	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R331	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R332	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R333	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R334	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R335	1-216-845-11	METAL CHIP	100K	5%	1/16W
R336	1-216-845-11	METAL CHIP	100K	5%	1/16W
R337	1-216-833-11	METAL CHIP	10K	5%	1/16W
R338	1-216-833-11	METAL CHIP	10K	5%	1/16W
R339	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R340	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R341	1-216-813-11	METAL CHIP	220	5%	1/16W
R342	1-216-813-11	METAL CHIP	220	5%	1/16W
R361	1-215-891-11	METAL OXIDE	680	5%	2W
R362	1-215-891-11	METAL OXIDE	680	5%	2W
R363	1-216-821-11	METAL CHIP	1K	5%	1/16W
R364	1-216-821-11	METAL CHIP	1K	5%	1/16W
R365	1-216-841-11	METAL CHIP	47K	5%	1/16W
R366	1-216-833-11	METAL CHIP	10K	5%	1/16W
R367	1-216-821-11	METAL CHIP	1K	5%	1/16W
R368	1-216-845-11	METAL CHIP	100K	5%	1/16W
R369	1-216-837-11	METAL CHIP	22K	5%	1/16W
R370	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R371	1-216-841-11	METAL CHIP	47K	5%	1/16W
R372	1-216-841-11	METAL CHIP	47K	5%	1/16W
R373	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R374	1-216-841-11	METAL CHIP	47K	5%	1/16W
R375	1-216-809-11	METAL CHIP	100	5%	1/16W
R376	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R381	1-216-842-11	METAL CHIP	56K	5%	1/16W
R382	1-216-841-11	METAL CHIP	47K	5%	1/16W
R383	1-216-833-11	METAL CHIP	10K	5%	1/16W
R384	1-216-833-11	METAL CHIP	10K	5%	1/16W
R385	1-216-839-11	METAL CHIP	33K	5%	1/16W
R386	1-216-837-11	METAL CHIP	22K	5%	1/16W
R387	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R388	1-216-837-11	METAL CHIP	22K	5%	1/16W
R389	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R391	1-216-833-11	METAL CHIP	10K	5%	1/16W
R392	1-216-809-11	METAL CHIP	100	5%	1/16W
R393	1-216-806-11	RES-CHIP	56	5%	1/16W
R394	1-216-806-11	RES-CHIP	56	5%	1/16W
R601	1-216-821-11	METAL CHIP	1K	5%	1/16W
R602	1-216-819-11	METAL CHIP	680	5%	1/16W
R603	1-216-821-11	METAL CHIP	1K	5%	1/16W
R604	1-216-819-11	METAL CHIP	680	5%	1/16W
R605	1-216-821-11	METAL CHIP	1K	5%	1/16W
R606	1-216-819-11	METAL CHIP	680	5%	1/16W
R607	1-216-809-11	METAL CHIP	100	5%	1/16W
R608	1-216-809-11	METAL CHIP	100	5%	1/16W
R609	1-216-833-11	METAL CHIP	10K	5%	1/16W
R610	1-216-809-11	METAL CHIP	100	5%	1/16W
R611	1-216-833-11	METAL CHIP	10K	5%	1/16W
R612	1-216-809-11	METAL CHIP	100	5%	1/16W
R613	1-216-833-11	METAL CHIP	10K	5%	1/16W
R614	1-216-809-11	METAL CHIP	100	5%	1/16W
R615	1-216-809-11	METAL CHIP	100	5%	1/16W
R616	1-216-809-11	METAL CHIP	100	5%	1/16W
R618	1-216-833-11	METAL CHIP	10K	5%	1/16W
R625	1-216-833-11	METAL CHIP	10K	5%	1/16W
R626	1-216-809-11	METAL CHIP	100	5%	1/16W
R627	1-216-809-11	METAL CHIP	100	5%	1/16W
R628	1-216-809-11	METAL CHIP	100	5%	1/16W
R629	1-216-809-11	METAL CHIP	100	5%	1/16W
R630	1-216-809-11	METAL CHIP	100	5%	1/16W
R631	1-216-809-11	METAL CHIP	100	5%	1/16W
R632	1-216-833-11	METAL CHIP	10K	5%	1/16W
R633	1-216-809-11	METAL CHIP	100	5%	1/16W
R634	1-216-833-11	METAL CHIP	10K	5%	1/16W
R635	1-216-809-11	METAL CHIP	100	5%	1/16W
R636	1-216-809-11	METAL CHIP	100	5%	1/16W
R637	1-216-809-11	METAL CHIP	100	5%	1/16W
R638	1-216-833-11	METAL CHIP	10K	5%	1/16W
R639	1-216-841-11	METAL CHIP	47K	5%	1/16W
R640	1-216-841-11	METAL CHIP	47K	5%	1/16W
R641	1-216-833-11	METAL CHIP	10K	5%	1/16W (EA)
R641	1-216-827-11	METAL CHIP	3.3K	5%	1/16W (JE)
R641	1-216-823-11	METAL CHIP	1.5K	5%	1/16W (E,IA,MY,SP,TH,TW)
R642	1-216-821-11	METAL CHIP	1K	5%	1/16W
R643	1-216-821-11	METAL CHIP	1K	5%	1/16W

MAIN **MOTOR** **PANEL**

Ref. No.	Part No.	Description			Remarks
R644	1-216-851-11	METAL CHIP	330K	5%	1/16W
R645	1-216-833-11	METAL CHIP	10K	5%	1/16W
R646	1-216-833-11	METAL CHIP	10K	5%	1/16W
R647	1-216-864-11	METAL CHIP	0	5%	1/16W
R648	1-216-864-11	METAL CHIP	0	5%	1/16W
R649	1-216-833-11	METAL CHIP	10K	5%	1/16W
R650	1-216-833-11	METAL CHIP	10K	5%	1/16W
R651	1-216-864-11	METAL CHIP	0	5%	1/16W
R652	1-216-821-11	METAL CHIP	1K	5%	1/16W
R653	1-216-833-11	METAL CHIP	10K	5%	1/16W
R654	1-216-833-11	METAL CHIP	10K	5%	1/16W
R655	1-216-864-11	METAL CHIP	0	5%	1/16W
R656	1-216-809-11	METAL CHIP	100	5%	1/16W
R657	1-216-833-11	METAL CHIP	10K	5%	1/16W
R658	1-216-809-11	METAL CHIP	100	5%	1/16W
R659	1-216-833-11	METAL CHIP	10K	5%	1/16W
R660	1-216-809-11	METAL CHIP	100	5%	1/16W
R661	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R662	1-216-821-11	METAL CHIP	1K	5%	1/16W
R663	1-216-841-11	METAL CHIP	47K	5%	1/16W
R664	1-216-841-11	METAL CHIP	47K	5%	1/16W
R665	1-216-833-11	METAL CHIP	10K	5%	1/16W
R666	1-216-864-11	METAL CHIP	0	5%	1/16W
R667	1-216-841-11	METAL CHIP	47K	5%	1/16W
R668	1-216-864-11	METAL CHIP	0	5%	1/16W
R670	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R671	1-216-841-11	METAL CHIP	47K	5%	1/16W
R672	1-216-841-11	METAL CHIP	47K	5%	1/16W
R673	1-216-833-11	METAL CHIP	10K	5%	1/16W
R674	1-216-841-11	METAL CHIP	47K	5%	1/16W
R675	1-216-841-11	METAL CHIP	47K	5%	1/16W
R676	1-216-841-11	METAL CHIP	47K	5%	1/16W
R677	1-216-841-11	METAL CHIP	47K	5%	1/16W
R678	1-216-841-11	METAL CHIP	47K	5%	1/16W
R679	1-216-841-11	METAL CHIP	47K	5%	1/16W
R680	1-216-833-11	METAL CHIP	10K	5%	1/16W
R681	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R682	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R683	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R693	1-216-839-11	METAL CHIP	33K	5%	1/16W
R694	1-216-833-11	METAL CHIP	10K	5%	1/16W
R231A	1-216-821-11	METAL CHIP	1K	5%	1/16W
R232A	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB101	1-234-457-11	ENCAPSULATED COMPONENT			
		< VARIABLE RESISTOR >			
RV101	1-241-765-11	RES, ADJ, CARBON 22K			
RV661	1-241-762-11	RES, ADJ, CARBON 2.2K (E,EA,IA,JE,MY,SP,TW)			
RV661	1-241-762-11	RES, ADJ, CARBON 2.2K (TH)			
		< RELAY >			
RY371	1-755-373-11	RELAY			

Ref. No.	Part No.	Description			Remarks
		< TRANSFORMER >			
T101	1-435-195-31	TRANSFORMER, DISCRIMINATOR			
		< TERMINAL >			
TM101	1-694-555-11	TERMINAL BOARD (4P)			
		< VIBRATOR >			
X101	1-760-549-31	VIBRATOR, CRYSTAL (4.5MHz)			
X601	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X602	1-781-107-21	VIBRATOR, SERAMIC (16MHz)			
**********					
	1-675-910-14	MOTOR BOARD			
		**********			
		< CAPACITOR >			
C721	1-162-306-11	CERAMIC	0.01uF	30%	16V
		< CONNECTOR >			
CN721	1-770-516-31	CONNECTOR, FFC 8P			
CN722	1-785-330-11	PIN, CONNECTOR (LIGHT ANGLE)4P			
		< SWITCH >			
S701	1-771-822-11	SWITCH, LEVER (SLIDE) (OPEN/CLOSE SW)			
**********					
	A-4476-992-A	PANEL BOARD, COMPLETE (E,EA,IA,JE,MY,SP)			
		**********			
	A-4725-701-A	PANEL BOARD, COMPLETE (TW)			
		**********			
	A-4726-002-A	PANEL BOARD, COMPLETE (TH)			
		**********			
	4-234-016-01	FL HOLDER			
	7-685-872-09	SCREW +BVTT	3X8 (S)		
		< CAPACITOR >			
C701	1-126-966-11	ELECT	33uF	20%	50V
C702	1-126-966-11	ELECT	33uF	20%	50V
C703	1-162-306-11	CERAMIC	0.01uF	30%	16V
C704	1-124-589-11	ELECT	47uF	20%	16V
C705	1-162-294-31	CERAMIC	0.001uF	10%	50V
C706	1-162-294-31	CERAMIC	0.001uF	10%	50V
C707	1-162-294-31	CERAMIC	0.001uF	10%	50V
C708	1-162-282-31	CERAMIC	100PF	10%	50V
C709	1-162-282-31	CERAMIC	100PF	10%	50V
C710	1-162-282-31	CERAMIC	100PF	10%	50V
C711	1-162-282-31	CERAMIC	100PF	10%	50V
C712	1-162-282-31	CERAMIC	100PF	10%	50V
C713	1-162-282-31	CERAMIC	100PF	10%	50V
C714	1-162-282-31	CERAMIC	100PF	10%	50V
C715	1-162-282-31	CERAMIC	100PF	10%	50V
C716	1-161-494-00	CERAMIC	0.022uF	25V	
C718	1-162-306-11	CERAMIC	0.01uF	30%	16V
C719	1-162-219-31	CERAMIC	68PF	5%	50V
C720	1-162-306-11	CERAMIC	0.01uF	30%	16V
C721	1-124-589-11	ELECT	47uF	20%	16V

Ref. No.	Part No.	Description			Remarks
C722	1-162-282-31	CERAMIC	100PF	10%	50V
C723	1-162-282-31	CERAMIC	100PF	10%	50V
C724	1-162-282-31	CERAMIC	100PF	10%	50V
C725	1-162-282-31	CERAMIC	100PF	10%	50V
C726	1-162-282-31	CERAMIC	100PF	10%	50V
C727	1-162-282-31	CERAMIC	100PF	10%	50V
C728	1-162-282-31	CERAMIC	100PF	10%	50V
C729	1-162-282-31	CERAMIC	100PF	10%	50V
C730	1-162-282-31	CERAMIC	100PF	10%	50V
C731	1-162-282-31	CERAMIC	100PF	10%	50V
C732	1-162-282-31	CERAMIC	100PF	10%	50V
C733	1-162-282-31	CERAMIC	100PF	10%	50V
C734	1-162-306-11	CERAMIC	0.01uF	30%	16V
C735	1-162-306-11	CERAMIC	0.01uF	30%	16V
C736	1-162-294-31	CERAMIC	0.001uF	10%	50V
C737	1-162-294-31	CERAMIC	0.001uF	10%	50V
C738	1-104-665-11	ELECT	100uF	20%	10V
C739	1-104-665-11	ELECT	100uF	20%	10V
C740	1-126-959-11	ELECT	0.47uF	20%	50V
C741	1-126-959-11	ELECT	0.47uF	20%	50V
C742	1-136-495-11	FILM	0.068uF	5%	50V
C743	1-162-294-31	CERAMIC	0.001uF	10%	50V
C744	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C745	1-126-960-11	ELECT	1uF	20%	50V
C746	1-126-947-11	ELECT	47uF	20%	16V
C747	1-136-167-00	FILM	0.15uF	5%	50V
C748	1-126-947-11	ELECT	47uF	20%	16V
C749	1-136-495-11	FILM	0.068uF	5%	50V
C750	1-162-294-31	CERAMIC	0.001uF	10%	50V
C751	1-162-305-11	CERAMIC	0.0068uF	30%	16V
C752	1-126-960-11	ELECT	1uF	20%	50V
C753	1-110-671-31	CERAMIC	47000PF	50V	
C754	1-162-215-31	CERAMIC	47PF	5%	50V
C755	1-126-957-11	ELECT	0.22uF	20%	50V
C756	1-162-294-31	CERAMIC	0.001uF	10%	50V
C757	1-162-306-11	CERAMIC	0.01uF	30%	16V
C758	1-126-956-91	ELECT	0.1uF	20%	50V
C759	1-162-290-31	CERAMIC	470PF	10%	50V
C760	1-126-961-11	ELECT	2.2uF	20%	50V
C761	1-162-215-31	CERAMIC	47PF	5%	50V
C762	1-162-282-31	CERAMIC	100PF	10%	50V
C763	1-126-961-11	ELECT	2.2uF	20%	50V
C764	1-126-961-11	ELECT	2.2uF	20%	50V
C765	1-126-964-11	ELECT	10uF	20%	50V
C766	1-126-964-11	ELECT	10uF	20%	50V
C767	1-164-159-21	CERAMIC	0.1uF		50V
C768	1-162-306-11	CERAMIC	0.01uF	30%	16V
C769	1-126-957-11	ELECT	0.22uF	20%	50V
C770	1-164-159-21	CERAMIC	0.1uF		50V
C771	1-126-964-11	ELECT	10uF	20%	50V
C772	1-126-964-11	ELECT	10uF	20%	50V
C773	1-126-947-11	ELECT	47uF	20%	10V
C774	1-126-935-11	ELECT	470uF	20%	10V
C775	1-162-306-11	CERAMIC	0.01uF	30%	16V
C776	1-162-306-11	CERAMIC	0.01uF	30%	16V
C777	1-164-159-11	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description				Remarks
		< CONNECTOR >				
CN711	1-793-767-11	CONNECTOR, BOARD TO BOARD 30P				
CN712	1-785-339-11	PIN, CONNECTOR (LIGHT ANGLE) 13P				
		< DIODE >				
D701	8-719-071-44	DIODE	SELS5223C-TP15 (I/⏻)			
D702	8-719-084-40	DIODE	SEL5955A-TP15 (MD/VIDEO)			
D703	8-719-084-40	DIODE	SEL5955A-TP15 (TAPE A/B)			
D704	8-719-084-40	DIODE	SEL5955A-TP15 (CD)			
D705	8-719-084-40	DIODE	SEL5955A-TP15 (TUNER/BAND)			
D706	8-719-084-40	DIODE	SEL5955A-TP15 (GAME)			
D712	8-719-109-85	DIODE	MTZJ-T-77-5.1B			
D713	8-719-991-33	DIODE	1SS133T-77			
D714	8-719-991-33	DIODE	1SS133T-77			
D715	8-719-991-33	DIODE	1SS133T-77			
D716	8-719-084-40	DIODE	SEL5955A-TP15 (MD (VIDEO))			
D717	8-719-084-40	DIODE	SEL5955A-TP15 (TAPE A/B)			
D718	8-719-084-40	DIODE	SEL5955A-TP15 (CD)			
D719	8-719-084-40	DIODE	SEL5955A-TP15 (TUNER/BAND)			
D720	8-719-084-40	DIODE	SEL5955A-TP15 (GAME)			
D721	8-719-991-33	DIODE	1SS133T-77			
		< FERRITE BEAD >				
FB701	1-412-473-41	INDUCTOR	0uH			
		< FLUORESCENT INDICATOR >				
FLD1	1-518-729-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC701	6-800-220-01	IC uPD780232GC-031-8BT				
IC702	8-759-710-97	IC NJM4565M(TE2)				
IC703	8-759-496-41	IC M65850FP-E1				
IC704	8-759-295-90	IC NJM2244M-TE2				
SENS701	8-759-827-70	IC NJL64H400A-1(R)				
		< JACK >				
J701	1-691-293-21	JACK (VIDEO/AUDIO INPUT)				
J702	1-815-603-11	JACK (MIC2)				
J703	1-815-603-11	JACK (MIC1)				
J704	1-815-684-11	JACK, PIN 3P (GAME VIDEO/AUDIO L)				
		< TRANSISTOR >				
Q701	8-729-900-63	TRANSISTOR	BN1F4M-TP			
Q702	8-729-900-80	TRANSISTOR	BA1A4M-TP			
Q703	8-729-900-80	TRANSISTOR	BA1A4M-TP			
Q704	8-729-900-80	TRANSISTOR	BA1A4M-TP			
Q705	8-729-900-80	TRANSISTOR	BA1A4M-TP			
Q706	8-729-900-80	TRANSISTOR	BA1A4M-TP			
Q711	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
		< RESISTOR >				
R701	1-249-410-11	CARBON	270	5%	1/4W	F
R702	1-249-411-11	CARBON	330	5%	1/4W	
R722	1-247-843-11	CARBON	3.3K	5%	1/4W	
R723	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R724	1-249-427-11	CARBON	6.8K	5%	1/4W	F

PANEL | POWER

Ref. No.	Part No.	Description			Remarks
R725	1-249-429-11	CARBON	10K	5%	1/4W
R738	1-249-421-11	CARBON	2.2K	5%	1/4W F
R740	1-249-404-00	CARBON	82	5%	1/4W F
R741	1-249-429-11	CARBON	10K	5%	1/4W
R742	1-249-429-11	CARBON	10K	5%	1/4W
R743	1-249-434-11	CARBON	27K	5%	1/4W
R744	1-249-434-11	CARBON	27K	5%	1/4W
R747	1-249-429-11	CARBON	10K	5%	1/4W
R748	1-249-429-11	CARBON	10K	5%	1/4W
R749	1-249-429-11	CARBON	10K	5%	1/4W
R750	1-249-429-11	CARBON	10K	5%	1/4W
R751	1-249-437-11	CARBON	47K	5%	1/4W
R752	1-249-429-11	CARBON	10K	5%	1/4W
R753	1-249-429-11	CARBON	10K	5%	1/4W
R755	1-249-429-11	CARBON	10K	5%	1/4W
R756	1-247-807-31	CARBON	100	5%	1/4W
R757	1-249-429-11	CARBON	10K	5%	1/4W
R758	1-247-807-31	CARBON	100	5%	1/4W
R759	1-249-429-11	CARBON	10K	5%	1/4W
R760	1-247-807-31	CARBON	100	5%	1/4W
R761	1-249-429-11	CARBON	10K	5%	1/4W
R762	1-247-807-31	CARBON	100	5%	1/4W
R763	1-249-429-11	CARBON	10K	5%	1/4W
R764	1-249-429-11	CARBON	10K	5%	1/4W
R765	1-247-903-00	CARBON	1M	5%	1/4W
R767	1-249-429-11	CARBON	10K	5%	1/4W
R768	1-247-807-31	CARBON	100	5%	1/4W
R769	1-249-401-11	CARBON	47	5%	1/4W F
R770	1-249-417-11	CARBON	1K	5%	1/4W F
R771	1-249-430-11	CARBON	12K	5%	1/4W
R772	1-249-429-11	CARBON	10K	5%	1/4W
R773	1-249-433-11	CARBON	22K	5%	1/4W
R774	1-249-433-11	CARBON	22K	5%	1/4W
R775	1-249-433-11	CARBON	22K	5%	1/4W
R776	1-249-410-11	CARBON	270	5%	1/4W F
R777	1-247-881-00	CARBON	120K	5%	1/4W
R778	1-249-437-11	CARBON	47K	5%	1/4W
R779	1-249-433-11	CARBON	22K	5%	1/4W
R780	1-249-433-11	CARBON	22K	5%	1/4W
R781	1-249-433-11	CARBON	22K	5%	1/4W
R782	1-249-431-11	CARBON	15K	5%	1/4W
R783	1-249-417-11	CARBON	1K	5%	1/4W F
R784	1-249-441-11	CARBON	100K	5%	1/4W
R785	1-249-429-11	CARBON	10K	5%	1/4W
R786	1-249-417-11	CARBON	1K	5%	1/4W F
R787	1-249-437-11	CARBON	47K	5%	1/4W
R788	1-247-807-31	CARBON	100	5%	1/4W
R789	1-249-429-11	CARBON	10K	5%	1/4W
R790	1-247-885-00	CARBON	180K	5%	1/4W
R791	1-247-807-31	CARBON	100	5%	1/4W
R792	1-249-441-11	CARBON	100K	5%	1/4W
R793	1-249-429-11	CARBON	10K	5%	1/4W
R794	1-249-417-11	CARBON	1K	5%	1/4W F
R795	1-249-431-11	CARBON	15K	5%	1/4W
R796	1-249-401-11	CARBON	47	5%	1/4W F

Ref. No.	Part No.	Description			Remarks
R799	1-249-401-11	CARBON	47	5%	1/4W F
R800	1-249-429-11	CARBON	10K	5%	1/4W
R801	1-247-804-11	CARBON	75	5%	1/4W
R805	1-247-807-31	CARBON	100	5%	1/4W
R806	1-249-403-11	CARBON	68	5%	1/4W F
		< VIBRATOR >			
RES701	1-795-058-21	VIBRATOR, CERAMIC (5MHz)			
		< SWITCH >			
S701	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
S702	1-762-875-21	SWITCH, KEYBOARD (GAME)			
S722	1-762-875-21	SWITCH, KEYBOARD (MD (VIDEO))			
S723	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)			
S724	1-762-875-21	SWITCH, KEYBOARD (TUNER BAND)			
S725	1-762-875-21	SWITCH, KEYBOARD (CD)			
		< VARIABLE RESISTOR >			
VR701	1-418-725-11	ENCODER, ROTARY (12 TYPE) (VOLUME)			
VR702	1-225-739-11	RES, VAR CARBON 50K (ECHO LEVEL)			
VR703	1-225-739-11	RES, VAR CARBON 50K (MIC LEVEL)			
**********					
	A-4725-707-A	POWER AMP BOARD, COMPLETE			(E,EA,IA,JE,MY,SP)
		**********			
	A-4725-712-A	POWER AMP BOARD, COMPLETE (TW)			
		**********			
	A-4726-012-A	POWER AMP BOARD, COMPLETE (TH)			
		**********			
		< CAPACITOR >			
C501	1-126-964-11	ELECT	10uF	20%	50V
C502	1-162-294-31	CERAMIC	0.001uF	10%	50V
C503	1-162-282-31	CERAMIC	100PF	10%	50V
C504	1-128-551-11	ELECT	22uF	20%	25V
C507	1-130-493-00	MYLAR	0.068uF	5%	50V
C508	1-130-493-00	MYLAR	0.068uF	5%	50V
C509	1-128-560-11	ELECT	22uF	20%	100V
C511	1-162-306-11	CERAMIC	0.01uF	30%	16V
C512	1-162-294-31	CERAMIC	0.001uF	10%	50V (TW)
C513	1-162-294-31	CERAMIC	0.001uF	10%	50V (TW)
C541	1-130-777-00	MYLAR	0.1uF	10%	100V
C542	1-135-928-21	ELECT	2200uF	20%	63V
C543	1-164-159-21	CERAMIC	0.1uF		50V
C544	1-126-942-61	ELECT	1000uF	20%	25V
C545	1-128-549-11	ELECT	3300uF	20%	35V
C551	1-126-964-11	ELECT	10uF	20%	50V
C552	1-162-294-31	CERAMIC	0.001uF	10%	50V
C553	1-162-282-31	CERAMIC	100PF	10%	50V
C554	1-128-551-11	ELECT	22uF	20%	25V
C557	1-130-493-00	MYLAR	0.068uF	5%	50V
C558	1-130-493-00	MYLAR	0.068uF	5%	50V
C559	1-128-560-11	ELECT	22uF	20%	100V
C591	1-130-777-00	MYLAR	0.1uF	10%	100V
C592	1-135-928-11	ELECT	2200uF	20%	63V

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN502	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P			
CN503	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P			
CN504	1-785-314-11	PIN, CONNECTOR (STRAIGHT) 2P			
		< DIODE >			
D501	8-719-991-33	DIODE 1SS133T-77			
D502	8-719-991-33	DIODE 1SS133T-77			
D541	8-719-510-68	DIODE D5SBA204101			
D542	8-719-210-21	DIODE 11EQS04-NTA1B			
D543	8-719-210-21	DIODE 11EQS04-NTA1B			
D551	8-719-991-33	DIODE 1SS133T-77			
		< TERMINAL >			
* EP501	1-537-738-21	TERMINAL, EARTH (TW)			
* EP502	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC501	8-749-016-96	IC STK402-120S			
		< TRANSISTOR >			
Q501	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
Q503	8-729-140-82	TRANSISTOR	2SA988TP-PAFAEA		
Q504	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
Q551	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
Q581	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
Q582	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
Q583	8-729-900-36	TRANSISTOR	BA1F4M-TP		
Q584	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
		< RESISTOR >			
R501	1-249-417-11	CARBON	1K	5%	1/4W F
R502	1-249-438-11	CARBON	56K	5%	1/4W
R503	1-249-416-11	CARBON	820	5%	1/4W F
R504	1-249-438-11	CARBON	56K	5%	1/4W
R505	1-249-417-11	CARBON	1K	5%	1/4W F
R506	1-249-431-11	CARBON	15K	5%	1/4W
R507	1-249-441-11	CARBON	100K	5%	1/4W
⚠R508	1-217-156-00	METAL	0.22	20%	5W
R509	1-260-076-11	CARBON	10	5%	1/2W
⚠R510	1-217-156-00	METAL	0.22	20%	5W
⚠R511	1-212-881-11	FUSIBLE	100	5%	1/4W
⚠R512	1-202-972-61	FUSIBLE	1	5%	1/4W
R513	1-249-433-11	CARBON	22K	5%	1/4W
R514	1-249-421-11	CARBON	2.2K	5%	1/4W F
R515	1-249-433-11	CARBON	22K	5%	1/4W
R516	1-249-429-11	CARBON	10K	5%	1/4W
R517	1-249-421-11	CARBON	2.2K	5%	1/4W F
R518	1-249-429-11	CARBON	10K	5%	1/4W
R519	1-249-433-11	CARBON	22K	5%	1/4W
R520	1-249-441-11	CARBON	100K	5%	1/4W
R521	1-249-441-11	CARBON	100K	5%	1/4W
R522	1-249-441-11	CARBON	100K	5%	1/4W
R523	1-249-409-11	CARBON	220	5%	1/4W F
R524	1-247-897-11	CARBON	560K	5%	1/4W
R525	1-249-437-11	CARBON	47K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
R541	1-260-115-11	CARBON	22K	5%	1/2W
R551	1-249-417-11	CARBON	1K	5%	1/4W F
R552	1-249-438-11	CARBON	56K	5%	1/4W
R553	1-249-416-11	CARBON	820	5%	1/4W F
R554	1-249-438-11	CARBON	56K	5%	1/4W
R555	1-249-417-11	CARBON	1K	5%	1/4W F
R556	1-249-431-11	CARBON	15K	5%	1/4W
R557	1-249-441-11	CARBON	100K	5%	1/4W
⚠R558	1-217-156-00	METAL	0.22	20%	5W
R559	1-260-076-11	CARBON	10	5%	1/2W
⚠R560	1-217-156-00	METAL	0.22	20%	5W
⚠R561	1-212-881-11	FUSIBLE	100	5%	1/4W
R581	1-249-435-11	CARBON	33K	5%	1/4W
R582	1-249-435-11	CARBON	33K	5%	1/4W
R591	1-260-115-11	CARBON	22K	5%	1/2W
⚠R592	1-219-591-11	FUSIBLE	0.1	5%	1/2W
⚠R593	1-219-119-81	FUSIBLE	0.1	5%	1/4W
**********					
	1-681-442-11	SENSOR BOARD			
		**********			
		< THERMISTOR >			
TH501	1-807-796-11	THERMISTOR			
**********					
	1-681-445-11	SUB TRANS BOARD			
		**********			
		< CAPACITOR >			
⚠C901	1-113-925-11	CERAMIC	0.01uF	20%	250V
C902	1-126-768-11	ELECT	2200uF	20%	16V
C903	1-126-933-11	ELECT	100uF	20%	16V
		< CONNECTOR >			
CN2	1-568-106-11	PIN, CONNECTOR 4P (E,EA,IA,JE,MY,SP,TW)			
* CN2	1-564-321-21	PIN, CONNECTOR 2P (TH)			
CN901	1-564-321-00	PIN, CONNECTOR 2P			
CN903	1-785-315-11	PIN, CONNECTOR (STRAIGHT) 3P			
		< DIODE >			
D901	8-719-991-33	DIODE 1SS133T-77			
D902	8-719-200-82	DIODE 11ES2-NTA1B			
D903	8-719-200-82	DIODE 11ES2-NTA1B			
D904	8-719-200-82	DIODE 11ES2-NTA1B			
D905	8-719-200-82	DIODE 11ES2-NTA1B			
		< IC >			
IC901	8-759-158-62	IC TA78057S			
		< TRANSISTOR >			
Q901	8-729-119-78	TRANSISTOR	2SC2785TP-HFE		
		< RESISTOR >			
R902	1-249-429-11	CARBON	10K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SUB TRANS **TRANS** **VIDEO CD**

Ref. No.	Part No.	Description			Remarks
		< RELAY >			
⚠RY901	1-755-276-11	RELAY, POWER			
		< TRANSFORMER >			
⚠T901	1-435-828-11	TRANSFORMER, POWER			
**********					
	1-681-444-11	TRANS BOARD			
		**********			
	1-533-217-31	HOLDER, FUSE			
		< CAPACITOR >			
C911	1-128-553-11	ELECT	220uF	20%	63V
C912	1-126-964-11	ELECT	10uF	20%	50V
C913	1-126-968-11	ELECT	100uF	20%	50V
C915	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN915	1-564-528-11	PLUG, CONNECTOR 13P			
		< DIODE >			
D911	8-719-200-82	DIODE 11ES2-NTA1B			
D912	8-719-982-20	DIODE MTZJ-T-77-30B			
D913	8-719-109-89	DIODE MTZJ-T-77-5.6B			
		< FUSE >			
⚠F914	1-533-949-31	FUSE, CYLINDRICAL (TIME LUG) (8A/250V)			
⚠F919	1-533-472-11	FUSE, GLASS TUBE (DIA. 5) (5A/250V) (E,EA,IA,JE,MY,SP,TW)			
⚠F920	1-533-949-31	FUSE, CYLINDRICAL (TIME LUG) (8A/250V)			
		< TRANSISTOR >			
Q911	8-729-048-52	TRANSISTOR	2SA1932(TP)		
		< RESISTOR >			
R905	1-249-429-11	CARBON	10K	5%	1/4W
⚠R911	1-217-637-00	FUSIBLE	1	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W F
R913	1-249-429-11	CARBON	10K	5%	1/4W
R915	1-247-807-31	CARBON	100	5%	1/4W
R916	1-247-807-31	CARBON	100	5%	1/4W
⚠R920	1-219-122-91	FUSIBLE	0.33	5%	1/4W
		< SWITCH >			
⚠S901	1-786-055-21	SELECTOR, VOLTAGE (E,EA,IA,JE,MY,SP,TW)			
**********					

Ref. No.	Part No.	Description			Remarks
	A-4726-022-A	VIDEO CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C102	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C103	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C201	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C202	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C203	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C304	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C305	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C306	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C307	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C308	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C309	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C310	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C311	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C312	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C313	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C314	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C315	1-163-255-11	CERAMIC CHIP	150PF	5%	50V
C316	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C317	1-126-193-11	ELECT	1uF	20%	50V
C318	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C319	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C320	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C321	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C322	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C323	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C324	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C325	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C401	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C402	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C504	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C505	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C506	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C507	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C508	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C509	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C510	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C531	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C532	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C535	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C536	1-126-193-11	ELECT	1uF	20%	50V
C537	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C539	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C540	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C541	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C542	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C543	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C544	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C545	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C546	1-165-319-11	CERAMIC CHIP	0.1uF		50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remarks
C547	1-126-193-11	ELECT	1uF	20%	50V
C548	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C549	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C550	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C551	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C552	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C553	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C555	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C556	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C559	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C561	1-163-089-00	CERAMIC CHIP	6PF		50V
C563	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C564	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C565	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C566	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C568	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C569	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C570	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C571	1-128-065-11	ELECT CHIP	68uF	20%	10V
C573	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C574	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C576	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C577	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CN301	1-564-506-11	PLUG, CONNECTOR 3P			
CN501	1-779-343-11	CONNECTOR, FFC/FPC 23P			
CN502	1-779-416-11	CONNECTOR,FFC(LIF(NON-ZIF))13P			
		< TRIMMER >			
CT503	1-141-539-11	CAP, ADJ 10PF			
		< DIODE >			
D501	8-719-056-77	DIODE UDZ-TE-17-3.9B			
		< IC >			
IC101	8-759-701-40	IC NJM2100M(TE2)			
IC301	8-759-530-30	IC TC74VHCU04FT(EL)			
IC302	8-759-662-94	IC NJM2255M(TE2)			
IC303	8-759-711-47	IC NJM2209M(TE2)			
IC304	8-759-662-95	IC BA7665FS-E2			
IC501	8-759-530-30	IC TC74VHCU04FT(EL)			
IC502	6-800-186-01	IC M30620MCA-B22FP			
IC504	8-759-530-30	IC TC74VHCU04FT(EL)			
IC505	8-759-535-48	IC CL680T-D1			
IC506	8-759-677-67	IC LC372100PM-K-98-TLA			
IC507	8-759-342-01	IC MSM514260C-60JS			
IC509	8-759-535-62	IC PCM1727E-2/T2			
		< JACK >			
J301	1-537-943-11	TERMINAL, S (S VIDEO)			
		< JUMPER RESISTOR >			
JW101	1-216-295-00	SHORT	0		
JW201	1-216-295-00	SHORT	0		
JW301	1-216-295-00	SHORT	0		
JW302	1-216-025-11	RES-CHIP	100	5%	1/10W
JW304	1-216-295-00	SHORT	0		

Ref. No.	Part No.	Description			Remarks
JW413	1-216-295-00	SHORT	0		
JW504	1-216-295-00	SHORT	0		
JW505	1-216-295-00	SHORT	0		
JW513	1-216-295-00	SHORT	0		
		< COIL >			
L301	1-410-372-21	INDUCTOR	1.8uH		
L302	1-410-372-21	INDUCTOR	1.8uH		
L303	1-410-658-31	INDUCTOR CHIP	220uH		
L501	1-216-296-11	SHORT	0		
L502	1-216-296-11	SHORT	0		
L504	1-410-375-11	INDUCTOR CHIP	3.3uH		
L505	1-216-296-11	SHORT	0		
L506	1-216-296-11	SHORT	0		
L507	1-216-296-11	SHORT	0		
L508	1-216-296-11	SHORT	0		
L509	1-216-296-11	SHORT	0		
L510	1-216-296-11	SHORT	0		
L511	1-469-145-21	FERRITE	0uH		
L512	1-469-145-21	FERRITE	0uH		
L513	1-469-145-21	FERRITE	0uH		
		< TRANSISTOR >			
Q501	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q502	8-729-900-53	TRANSISTOR	DTC114EKA-T146		
Q531	8-729-140-75	TRANSISTOR	2SD999-T1-CLCK		
		< RESISTOR >			
R101	1-216-073-00	RES-CHIP	10K	5%	1/10W
R102	1-208-441-61	RES-CHIP	1.5K	2%	1/10W
R103	1-208-441-61	RES-CHIP	1.5K	2%	1/10W
R201	1-216-073-91	RES-CHIP	10K	5%	1/10W
R202	1-208-441-61	RES-CHIP	1.5K	2%	1/10W
R203	1-208-441-61	RES-CHIP	1.5K	2%	1/10W
R302	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R303	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R306	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R308	1-216-073-00	RES-CHIP	10K	5%	1/10W
R309	1-216-073-00	RES-CHIP	10K	5%	1/10W
R310	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R311	1-216-029-00	METAL CHIP	150	5%	1/10W
R312	1-216-073-00	RES-CHIP	10K	5%	1/10W
R313	1-216-073-00	RES-CHIP	10K	5%	1/10W
R314	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R315	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R316	1-216-022-00	METAL CHIP	75	5%	1/10W
R317	1-216-022-00	METAL CHIP	75	5%	1/10W
R318	1-216-295-00	SHORT	0		
R319	1-216-624-11	METAL CHIP	75	0.5%	1/10W
R320	1-216-295-00	SHORT	0		
R403	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R404	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R501	1-216-025-11	RES-CHIP	100	5%	1/10W
R502	1-216-025-11	RES-CHIP	100	5%	1/10W
R503	1-216-025-11	RES-CHIP	100	5%	1/10W
R504	1-216-025-11	RES-CHIP	100	5%	1/10W
R505	1-216-025-11	RES-CHIP	100	5%	1/10W
R506	1-216-025-11	RES-CHIP	100	5%	1/10W

VIDEO CD | VIDEO OUT

Ref. No.	Part No.	Description			Remarks
R507	1-216-073-00	RES-CHIP	10K	5%	1/10W
R508	1-216-073-00	RES-CHIP	10K	5%	1/10W
R516	1-216-073-00	RES-CHIP	10K	5%	1/10W
R517	1-216-073-00	RES-CHIP	10K	5%	1/10W
R518	1-216-073-00	RES-CHIP	10K	5%	1/10W
R519	1-216-025-11	RES-CHIP	100	5%	1/10W
R520	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R521	1-216-073-00	RES-CHIP	10K	5%	1/10W
R523	1-216-013-00	METAL CHIP	33	5%	1/10W
R530	1-216-025-11	RES-CHIP	100	5%	1/10W
R531	1-216-025-11	RES-CHIP	100	5%	1/10W
R532	1-216-295-00	SHORT	0		
R533	1-216-295-00	SHORT	0		
R534	1-216-073-00	RES-CHIP	10K	5%	1/10W
R535	1-216-073-00	RES-CHIP	10K	5%	1/10W
R536	1-216-033-00	METAL CHIP	220	5%	1/10W
R537	1-216-025-11	RES-CHIP	100	5%	1/10W
R538	1-216-073-00	RES-CHIP	10K	5%	1/10W
R539	1-216-295-00	SHORT	0		
R540	1-216-295-00	SHORT	0		
R542	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R543	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R544	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R545	1-216-025-11	RES-CHIP	100	5%	1/10W
R546	1-216-049-11	RES-CHIP	1K	5%	1/10W
R548	1-216-049-11	RES-CHIP	1K	5%	1/10W
R549	1-216-025-11	RES-CHIP	100	5%	1/10W
R550	1-216-025-11	RES-CHIP	100	5%	1/10W
R551	1-216-025-11	RES-CHIP	100	5%	1/10W
R552	1-216-025-11	RES-CHIP	100	5%	1/10W
R555	1-216-121-11	RES-CHIP	1M	5%	1/10W
R556	1-216-025-11	RES-CHIP	100	5%	1/10W
R557	1-216-025-11	RES-CHIP	100	5%	1/10W
R560	1-216-653-11	METAL CHIP	1.2K	0.5%	1/10W
R561	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R562	1-216-073-00	RES-CHIP	10K	5%	1/10W
R563	1-216-073-00	RES-CHIP	10K	5%	1/10W
R577	1-216-081-00	METAL CHIP	22K	5%	1/10W
R578	1-216-081-00	METAL CHIP	22K	5%	1/10W
R579	1-216-073-00	RES-CHIP	10K	5%	1/10W
R580	1-216-073-00	RES-CHIP	10K	5%	1/10W
		< VIBRATOR >			
X501	1-767-510-11	VIBRATOR, CERAMIC (10MHz)			
X503	1-767-519-11	VIBRATOR, CRYSTAL (27MHz)			

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Ref. No.	Part No.	Description	Remarks
	1-681-441-11	VIDEO OUT BOARD	
		**********	
		< CONNECTOR >	
CN714	1-564-505-11	PLUG, CONNECTOR 2P	
		< JACK >	
JK705	1-774-227-11	JACK, PIN 1P (VIDEO OUT)	

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		MISCELLANEOUS	
		**********	
14	1-792-246-11	WIRE (FLAT TYPE) (23 CORE)	
64	1-796-124-11	DECK, MECH	
101	1-773-049-11	WIRE (FLAT TYPE) (17 CORE)	
104	1-769-986-11	WIRE (FLAT TYPE) (13 CORE)	
⚠108	1-777-071-81	CORD, POWER (EA,MY,SP,TW)	
⚠108	1-791-901-11	CORD, POWER (E,IA,JE,TH)	
259	1-791-983-11	WIRE (FLAT TYPE) (8 CORE)	
266	1-471-035-11	MAGNET ASSY	
⚠286	8-820-116-01	OPTICAL PICK-UP KSM-213DCP/Z-NP	
288	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
FLD1	1-518-729-11	INDICATOR TUBE, FLUORESCENT	
M721	A-4672-826-A	MOTOR ASSY (TURN)	
M961	1-763-072-11	FAN, DC	
⚠T911	1-437-222-11	TRANSFORMER, POWER (E,EA,IA,JE,MY,SP,TW)	
⚠T911	1-437-228-11	TRANSFORMER, POWER (TH)	

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		HARDWARE LIST	
		**********	
#1	7-685-646-79	SCREW +BVTP	3X8 TYPE2 N-S
#2	7-685-871-01	SCREW +BVTT	3X6 (S)
#3	7-685-880-09	SCREW +BVTT	4X6 (S)
#4	7-685-650-79	SCREW +BVTP	3X16 TYPE2 IT-3
#5	7-685-872-09	SCREW +BVTT	3X8 (S)
#6	7-685-647-79	SCREW +BVTP	3X10 TYPE2 N-S

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.1	2001.09	Addition of a silver type on Thai model.
1.0	2001.06	New